HUMPHREY'S

Review Diagrams

CHARLES R. McKENNY

HUMPHREY'S

REVIEW DIAGRAMS.

AN OUTLINE

—OF—

U. S. History, Civil Government, Geography, Grammar, Reading, Orthography, Theory and Art of Teaching, Arithmetic and Physiology.

FOURTH EDITION,

REVISED AND ENLARGED.

BY

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PREFACE TO FOURTH EDITION.

Believing that tabulated outlines of the various branches taught in the common schools would be of service to teachers in the rural schools of Michigan, Honorable J. W. Humphrey, a practical schoolmaster, published in 1883 his Review Diagrams. The edition was soon exhausted. A second and third edition followed. The demand increased. The little booklet had sales in several states besides Michigan. It has been three years since the last copy of the third edition was sold.

The calls for the book have been so constant and numerous during the past two years that Mr. Humphrey has felt induced to issue another edition, and being too closely engaged by other interests, he asked my assistance.

All the outlines have been revised and enlarged, to bring them up to the best scholarship of to-day.

It is hoped by the authors that this edition will prove as helpful as the previous ones.

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SUGGESTIONS.

The object of this book is twofold, to furnish an outline for REVIEW and to offer BLACKBOARD WORK to the young teacher. Events standing alone are of little educational value. In the "Diagrams," subjects are grouped together, thus aiding the memory by helping the intelligence.

They are intended to be suggestive rather than complete.

UNITED STATES HISTORY.

PERIODS—

Prehistoric, before 1000.
Discovery and exploration, 1000–1607.
Colonization, 1607–1763.
The Revolution, 1763–1783.
The Confederation, 1783–1789.
Struggle between State Rights and National Authority, 1789–1865.
Later Development, 1865–1900.

PREHISTORIC AMERICA—

Inhabitants. Civilization, North, South.
Origin. Remains of their civilization.

DISCOVERY AND EXPLORATIONS, 1000–1607—

Northmen. English. Dutch.
Spanish. French.

NORTHMEN—

Leif Ericson, 1000.

SPANISH—

Motives leading to exploration.
Columbus, 1492, 1494, 1498, 1502.
Americus Vespucius, about 1497.
Vasco Nunez de Balboa, 1513.
Ponce de Leon, 1513–1521 (first attempt at settlement).
Cortez, 1519–1521.
Lucas Vasquez de Ayelon, 1526 (second attempt at settlement).
Francisco Vasquez Coronado, 1540–42.
Hernando De Soto, 1539.
Melendez, 1565.

ENGLISH—

The Cabots, 1498.
Frobisher, 1576.
Drake, 1579.
Gilbert, 1583.
Raleigh, 1585–6–7.
Gosnold, 1602.

FRENCH—

Verrazano, 1524.
Cartier, 1534–41.
The Hugenots, 1555–65.
Champlain, 1603-8–9.
De Monts, 1604.
La Salle, 1682.

DUTCH—

Henry Hudson, 1609.

TERRITORIAL CLAIMS, BASED ON DISCOVERY AND EXPLORATION.

Spain.
France.
England.
Netherlands.

FIRST SETTLEMENTS.

SPANISH—

St. Augustine, 1565.
Santa Fe, 1582.

ENGLISH—

Jamestown, 1607.
Plymouth, 1620.

FRENCH—

Port Royal, 1605.
Quebec, 1608.

DUTCH—

New York, 1623.

SWEDES—

On the Delaware, 1638.

OUTLINE HISTORIES OF COLONIES.

VIRGINIA—
1607-1715

London Company, Jamestown, 1607; Smith; Slaves, 1619; House of Burgesses, 1619; Royal Colony, Bacon's Rebellion, Industries, Local Government, Servants.

MASSACHUSETTS—
1620-1644

Plymouth Company, Puritans in England, Pilgrims in Holland, Mayflower, Mayflower Compact; Plymouth, 1620; Miles Standish, William Bradford, Massachusetts Bay Colony, Distinctions between Puritans and Pilgrims, Development of Political Freedom (Town-meeting, Representation, Voting by Ballot, Two Houses in the Legislature), Industries, Social Distinctions, Character of Settlers, Religious Difficulties, Witchcraft, Harvard College.

CONNECTICUT—
1635-1664

Settlement from Massachusetts, Drafted their own Charter, Charter from the Crown, Yale University.

RHODE ISLAND—
1636-1663

Roger Williams, Settlement of Providence and Newport, Religious Toleration, Charter.

NEW HAMPSHIRE—
1627-1677

Settlement from older Colonies, Land Grants.

NEW YORK—
1626-1691

Settlement by Dutch for Trade, Peter Stuyvesant, Taken by England, Jacob Leislar, Social Conditions, Patrons, Free Schools, Government.

NEW JERSEY—
1664-1738

Swedes, Dutch, English, Liberal Government, Quakers as Proprietors, East and West Jersey, Presbyterian Influence.

PENNSYLVANIA—
1681-1718

William Penn, Effort to Establish a Liberal but Firm Government, Philadelphia, Treaty with the Indians, Boundary Disputes, People quarrel with Proprietors.

DELAWARE—
1682

Swedes, Purchased by Penn, Becomes Separate Colony.

TABLE TO SHOW FACTS ABOUT THE COLONIES.

Colony	Date	Place	Nation	Religion	Purpose of Settlement	First Government	Government at Time of Revolution
Virginia	1607	Jamestown	English	Church of England	Gold and Commerce	Commercial Company	Royal
Massachusetts	1620 1628	Plymouth Salem	English	Pilgrim Puritan	Homes and freedom of worship.	Voluntary Charter	Semi-Royal
New York	1623	New York	Dutch	Dutch Reformed Church	Commerce	Commercial Company	Royal
New Hampshire	1623	Dover Portsmouth	English	Protestant	Homes—Commerce	Proprietary	Royal
Maryland	1634	St. Mary's	English	Roman Catholic and Toleration	Commerce—Refuge for Catholics in America.	Proprietary	Proprietary
Connecticut	1634–1636	Weathersfield. Hartford	English	Puritan	Homes	Charter	Charter
Rhode Island	1636	Providence	English	Baptist and Toleration	Religious freedom	Charter	Charter
Delaware	1638	Wilmington	Swedes	Protestant	Speculation—Commerce.	Proprietary	Proprietary
North Carolina	1650–1663	Chowan River Cape Fear Riv'r	English	Protestant	Commerce—Speculation.	Proprietary	Royal
New Jersey	1664	Elizabeth	English	Protestant	Commerce—Speculation.	Proprietary	Royal
South Carolina	1670	Ashley River	English	Protestant	Speculation	Proprietary	Royal
Pennsylvania	1682	Philadelphia	English	Protestant(Quaker)	Religious freedom—Penn's experiment in government.	Proprietary	Proprietary
Georgia	1733	Savannah	English	Protestant	Philanthropy	Proprietary	Royal

THE CAROLINAS—
1663-1729

John Locke and the Charter, Failure of System of Holding Land, John Archdale, Separation of Colonies, 1729; Industries, Character of Settlers.

MARYLAND—
1632-1716

Lord Baltimore, Catholics, Religious Toleration, Religious Troubles, Clayborne.

GEORGIA—
1732

James Oglethorpe, Efforts for the Suppression of Slavery and Use of Rum, The Wesleys, Royal Colony.

UNITED COLONIES OF NEW ENGLAND.

1643-1684.

Massachusetts.	New Haven.
Plymouth.	Connecticut.

FIRST UNION OF COLONIES.

PURPOSE—

Protection against Indians, Dutch and betterment of trade.

Massachusetts overbearing, colonies jealous of local rights; came to an end in 1684.

KING PHILIP'S WAR—
1675-1676

CAUSE: Indian jealousy.

Fought in New England. Twelve towns destroyed by Indians. One thousand Indians killed at South Kingston, R. I.

RESULT: Indians crushed.

Colonies show their spirit by refusing to ask England for aid, not wishing to be under obligations to the home government.

THE FIRST THREE INTER-COLONIAL WARS.

KING WILLIAM'S WAR—
1689-1697

CAUSE: War of Palatinate between England and France.

EVENTS: Indian massacres. Frontenac shatters the Iroquois in New York. Hannah Dustin.

RESULT: Treaty of Ryswick. Everything as before.

QUEEN ANN'S WAR—
1702-1713

CAUSE: War of Spanish Succession in Europe.

EVENTS: Massacre at Deerfield. English capture Nova Scotia.

RESULT: Treaty of Utrecht. England holds Nova Scotia.

KING GEORGE'S WAR—
1744 1748

CAUSE: Austrian Succession in Europe.

EVENTS: Capture of Louisburg.

RESULT: Treaty of Aix la Chapelle. Louisburg given back to France for Madras in India.

FRENCH AND INDIAN WAR.

(See Table, page 11.)

RESULT—

Treaty of Paris. France cedes all territory east of Mississippi to England, west of Mississippi to Spain. Spain cedes Florida to England.

OFFICERS.

British.	*French.*
Wolf, Braddock, Washington, Shirley, Johnson.	Montcalm, Dieskau.

The appointment of William Pitt as Prime Minister saved North America to the English. Pitt saw that the war might be made to decide the possession of North America and sent the best men and abundant money to the colonies.

FRENCH AND INDIAN WAR. (Seven years war in Europe.) 1754-1763 IN AMERICA.

WAR DECLARED 1756.

Cause	Objective Points	Importance	1754	1755	1756-1757	1758	1759
I. Immediate Settlement of Ohio Valley.	I. Du Quesne.	Controls Ohio Valley.	Washington defeated at Great Meadows, Fort Necessity	Braddock's defeat.		Captured.	
II. (1) Struggle for possession of North America. (2) Enmity of French and English.	II. Crown Point and Ticonderaga.	Control war route between Canada and New York.		Defeat at Lake George.		Defeat at Ticonderaga	Captured.
	III. Niagara.	Controls lake travel and fur trade.		Defeat.			Captured.
	IV. Acadia and Louisburg.	Controls fisheries and St. Lawrence.		Acadia captured.		Louisburg captured	
	V. Quebec.	Controls Canada.					Captured.

THE AMERICAN REVOLUTION.

CAUSE—Fundamental difference between England and the Colonies in ideas of government.

I. COLONIAL IDEA—

(*a*) Charters granted by the King, not revocable except by the consent of the people.

(*b*) Colonies were not, and could not be represented in Parliament, therefore, Parliament could not legislate for Colonies.

II. ENGLISH IDEA—

(*a*) Charter granted by King could be amended or revoked by King or Parliament.

(*b*) Every member of Parliament represented every part of the British Empire, therefore, the Colonies were represented and Parliament could legislate for Colonies.

PARLIAMENT ENDEAVORS TO ENFORCE ITS IDEAS IN—

Writs of Assistance, 1761; Navigation Acts, enforcement of, 1761-75; Stamp Act, 1765; Townshend Acts, 1767; Tax on Tea, 1770; Five Intolerable Acts, 1774, viz: Boston Port Bill, Transportation Bill, Massachusetts Bill, Quartering Act, Quebec Act.

BEGINNING OF ORGANIZED ACTION ON THE PART OF THE COLONIES—

I. Albany Congress and Franklin's plan of Union, 1754.

II. Stamp Act Congress, 1765; Nine Colonies represented, Issued Declaration of Rights, Petition to the King and to Parliament.

III. First Continental Congress, 1774; Twelve Colonies represented, Declaration of Rights; Addresses to King, English people, Canadians, Colonists; Non-importation agreement.

IV. Committees of correspondence, 1773—to Revolution.

RESISTANCE IN THE COLONIES—

Boston Massacre; Destruction of Gaspee; Boston Tea-party; Gathering of military stores; Battles of Lexington and Concord; British besieged in Boston.

EVENTS—1775—Second Continental Congress.

Washington made commander-in-chief.

Organized Continental Army.

Issued paper money.

Bunker Hill; Ticonderoga.

Disastrous expedition against Canada.

1776—Boston evacuated; Colonies ask advice of Congress and are advised to establish State Governments.

Declaration of Independence passed July 4th; No British soldiers on United States soil.

British plan to attack the centre, capture New York and Hudson River, dividing New England from the rest; Colonies had no navy, would be helpless.

New York Campaign; Washington's retreat across New Jersey; Low spirits of Americans; Capture of Trenton; Newport captured by British.

1777—British plan; Howe to move up the Hudson from New York; Burgoyne to come down from Canada via Ticonderoga to meet Howe; St. Leger from Lake Ontario through central New York to meet the other two.

Burgoyne captures Ticonderoga, is hindered in New York by Schuyler, loses men at Bennington; St. Leger's forces routed and scattered by Arnold's stratagem; Howe takes the advice of Charles Lee and moves on Philadelphia instead of up the Hudson to meet Burgoyne, is out-generaled by Washington, tries several times, forces Washington to a battle at Brandywine, defeats him, captures Philadelphia but it is too late to turn north to help Burgoyne, who is defeated by Arnold and Morgan (Gates commanding but not taking active part) at Saratoga, and surrenders Oct. 17, 1777.

1778—Valley Forge; Conway Cabal; French Alliance; Indian attacks, (Wyoming and Cherry Valleys); American Retaliation.

1779—George Rogers Clark gets control of the North West Territory for the United States.

1780—Arnold's treason; Lincoln surrenders Charleston; Gates defeated at Camden; Green given command in south; King's Mountain; Cowpens; Green draws Cornwallis out of extreme South through North Carolina.

1781—Guilford Courthouse; Yorktown, Oct. 19, 1781.
1783—Treaty of Peace, Paris.

FINANCES IN THE REVOLUTION—

Great issue of irredeemable paper money; Gold borrowed from France and Holland; Money borrowed from citizens; Supplies seized and bills of credit given; Paper money was never redeemed; Bank of North America established.

Navy weak and poorly equipped.

John Paul Jones (Bonhomme Richard and Serapis).

RESULTS—American Independence.

ARTICLES OF CONSTITUTION.

Proposed 1777.
Adopted 1781.

WEAKNESSES—

1. Required unanimous consent of States to amend.
2. No chief executive.
3. No supreme court.
4. Each state payed and controlled its representatives.
5. Congress could not control commerce.
6. Congress could not levy and collect taxes.

RESULT—States passed commercial restrictions on each other; Anarchy and confusion in Massachusetts; Foreign states would not carry out their treaties with us; General government bankrupt; United States rapidly becoming thirteen Independent governments.

ORDINANCE OF 1787.

CONSTITUTIONAL CONVENTION—

Met at Philadelphia; Most representative men of states there; Three compromises made; Proposed to the people and adopted, 1788.

The Federalist.

CONSTITUTIONAL PERIOD, 1789.

GEORGE WASHINGTON, Virginia.

1789-97.

VICE-PRESIDENT—John Adams.

FIRST CABINET—Secretary of State, Thomas Jefferson; Secretary of Treasury, Alexander Hamilton; Secretary of War, Henry Knox; Attorney General, Edmund Randolph.

EVENTS—Organization of executive departments; Supreme Court; First ten amendments to the constitution proposed by Congress and adopted.

HAMILTON'S FINANCIAL SCHEMES—

1. Pay debt in full, foreign and domestic.
2. Establish a United States bank.
3. Assume the state's debts.
4. Revenue tariff (protective).
5. Lay an excise tax.

Whiskey Insurrection.

Cotton gin by Eli Whitney, 1794.

RISE OF POLITICAL PARTIES—

Federalists, led by Hamilton; Principles, broad construction of constitution, large powers of Congress and limited powers of the states.

Democratic-Republicans, led by Jefferson; Principles, strict construction, large powers of the state and only those powers expressly stated in the constitution allowed Congress.

Trouble with France, Citizen Genet; Jay's treaty; Washington's farewell address.

STATES ADMITTED — Vermont, 1791; Kentucky, 1792; Tennessee, 1796.

JOHN ADAMS, Massachusetts.

1797-1801.

VICE-PRESIDENT—Thomas Jefferson.

SECRETARIES OF STATE—Timothy Pickering and John Marshall.

Important Events—Trouble with France, X. Y. Z. affair; Feeling against France made Federalists strong, tried to crush Democratic-Republicans by Alien and Sedition Laws, but provoked a reaction against themselves as shown in the Virginia and Kentucky Resolutions, and in the next election which went Democratic-Republican; Treaty with France; Capitol moved to Washington; John Marshall made Chief Justice; 11th amendment goes into effect.

THOMAS JEFFERSON, Virginia,
1801-1809.

Vice-Presidents—Aaron Burr; George Clinton.

Secretary of State—James Madison.

Important Events—Louisana Purchase, 1803; Lewis and Clark expedition; War with the Barbary States, 1801-1804; Internal improvements; War between England and France and their impositions on American commerce, viz: English Orders in Council and impressment of American seamen; French-Berlin and Milan Decrees; Embargo; Ohio admitted, 1802; Fulton invented the steamboat.

Note.—The Democratic-Republican party had come into power as strict constructionists, but in purchasing Louisana and laying the Embargo they had far exceeded the Federalists in exercising the implied powers of Congress. They are not broad construction from *principle*, however, as yet, but use these larger powers of Congress because they consider it *expedient* to do so.

JAMES MADISON, Virginia.
1809-1817.

Vice-Presidents—George Clinton; Elbridge Gerry.

Secretaries of State—Robert Smith and James Monroe.

Important Events—Battle of Tippecanoe, Tecumseh vs. Harrison.

War of 1812—1812-1814—2½ Years.

Causes—

1. Impressment of American seamen.
2. Violation of Neutral Rights on the American Coast by English ships.
3. Orders in Council.
4. Inciting the Indians against the United States.

EVENTS—Surrender of Detroit, Hull; Invasion of Canada via Niagara River, failure; Burning of Toronto, Dearborn, 1813; Perry's victory on Lake Erie; Battle of the Thames; The Creek War, Georgia and Alabama; Chippewa; Lundy's Lane; Fort Erie; Plattsburg; United States coast from Maine to Florida blockaded by English ships; Capture of Washington, 1814; Bombardment of Fort McHenry; Hartford convention; Battle of New Orleans. (After treaty had been signed).

NAVAL BATTLES—

The President and Little Belt; Constitution and Guerriere; Frolic and Wasp; Chesepeake and Shannon.

PEACE OF GHENT—

Everything left as before the war.

The navy had gained great glory for the United States, and gave us greater prestige in Europe than ever before. The war also freed us from all European entanglements. Also produced great national enthusiasm.

War with Algiers, 1815.

CHARTER OF A NATIONAL BANK, 1816—

The charter of the old National Bank expired in 1811, and the Democratic-Republican party, true to its strict construction principles, refused to recharter it. In 1816, being in debt, the finances of the country in a deplorable condition and being fired with great enthusiasm for the nation, as a whole, on account of the successes of the war, (naval successes and New Orleans,) the party became broad construction from *principle* as shown by the re-charter of the National Bank, by the high protective tariff of 1816, and the bill for internal improvements, the last passed by Congress but vetoed by Madison.

JAMES MONROE, Virginia.

1817-1825.

VICE-PRESIDENT—D. D. Tompkins.

SECRETARY OF STATE—John Q. Adams.

IMPORTANT EVENTS—Political conditions; Democratic-Republican party by adopting broad construction principles has absorbed the Federalist party. Consequently there is but one political party, which now calls itself "Republican"; Monroe's administration is hence called, "The Era of Good Feeling." Practically, it was not an era of good feeling, because the party was divided into factions; each faction having its leader with his personal following, hostile to every other division.

Cession of Florida, $5,000,000; Missouri compromise, 1820; Internal Improvement Bill passed by Congress, vetoed by Monroe; Erie Canal; Spanish American Republics; Monroe doctrine; New issues; National internal improvements; Protective tariff.

"Scrub race for the Presidency," so called because it was a personal contest and not a contest over national issues. No election, goes to the House of Representatives. John Q. Adams elected.

JOHN Q. ADAMS, Massachusetts.

1825-1829.

VICE-PRESIDENT—John C. Calhoun.

SECRETARY OF STATE—Henry Clay.

IMPORTANT EVENTS—Adams advocated internal improvements; Effort for Pan-American Congress; The Creeks move from Georgia, west of the Mississippi; Anti-Masonic party; Death of Adams and Jefferson; Protective Tariff of 1828, called the "Tariff of Abominations."

POLITICAL CONDITIONS—

Internal improvements and protective tariff divide the Republican party into two divisions. Jackson and VanBuren leading one division, which comes to be called the Democratic party; Clay and Webster leading the other division which called itself at first, "National Republican," and finally "Whig."

ANDREW JACKSON, Tennessee.

1829-1837.

VICE-PRESIDENTS—John C. Calhoun and Martin VanBuren.

SECRETARIES OF STATE—Martin VanBuren, Edward Livingston, Louis McLane and John Forsyth.

IMPORTANT EVENTS—A revolution in politics; Jackson a self-made man, a man of the people taking the place of the aristocratic leaders and trained politicians who had hitherto conducted the affairs of the Government.

"The Spoils-System;" "The Kitchen Cabinet;" Refusal to charter United States Bank; Removal of deposits; Nullification, 1832; Compromise tariff, 1833; Cherokees removed from Georgia; Black Hawk war; Seminole war.

PERIOD OF GREAT INDUSTRIAL DEVELOPMENT—

Successful application of steam to locomotives; Great development of steamboat navigation; Reaper invented; Use of anthracite coal; Friction matches; Gas for lighting purposes; Screw propeller for steamboats; Asylums for the blind, insane and deaf.

PERIOD OF GREAT LITERARY ADVANCEMENT—

Whittier, Emerson, Poe, Holmes, Longfellow, Hawthorne, Prescott, Bancroft.

MORAL AND SOCIAL REFORMS—

Temperance movement, John B. Gough; Rise of the Abolitionists, Wm. Lloyd Garrison, Wendell Phillips.

FINANCIAL PANIC—

The removal of deposits; The placing of the United States money in the "Pet Banks," causing speculation, and the distribution to the states of the surplus money in the United States treasury, causing the states to undertake enterprises which they could not pay for, brought on the panic of 1837.

STATES ADMITTED—Arkansas, 1836; Michigan, 1837.

MARTIN VANBUREN, New York.

1837-1841.

VICE-PRESIDENT—Richard M. Johnson.

SECRETARY OF STATE—John Forsyth.

IMPORTANT EVENTS—Panic of 1837 cripples VanBuren's administration; States repudiate debts; Establishment of the sub-treasury; Trouble with the Abolitionists; Murder of Lovejoy; Invention of vulcanized rubber by Chas. Goodyear; The election of Whig candidates—Harrison and Tyler; Whigs advocate no platform except opposition to the Democrats.

WILLIAM H. HARRISON, Ohio.

1841–1 month.

VICE-PRESIDENT—John Tyler.

SECRETARY OF STATE—Daniel Webster.

JOHN TYLER, Virginia.

1841-1845–3 years and 11 months.

SECRETARIES OF STATE—Daniel Webster and four others.

IMPORTANT EVENTS—Tyler, the first accidental President, elected on Whig ticket, but on principle an anti-Jackson Democrat, vetoes a bill to re-establish United States Bank; The treaty with England, called the Ashburton Treaty, 1842; Four points: Settlement of the North-west boundary; Extradition between the United States and Canada; Both nations agree to join in stopping the slave trade with Africa; Webster declares that American sailors would be protected by their flag.

Dorr war; Trouble with the Mormons; Free Soil party; Texas annexed, 1845.

STATES ADMITTED—Florida, 1845.

INVENTIONS—Telegraph, Samuel F. B. Morse.

The use of anaesthetics instituted.

JAMES K. POLK, Tennessee.

1845-1849.

VICE-PRESIDENT—George M. Dallas.

SECRETARY OF STATE—James Buchanan.

IMPORTANT EVENTS—Polk elected by the Democrats; War with Mexico, 1845-1848, cause, dispute over Texan boundary. Events: 1. Movement from the north under Taylor, successful; Battles of Monterey and Buena Vista. 2. General Scott against the city of Mexico, successful; Capture of Vera Cruz; Surrender of the city of Mexico. 3. General Kearney against New Mexico and Arizona, successful. 4. Conquest of California, combined naval and land expeditions, Fremont, successful.

Treaty of Guadalupe Hidalgo, 1848. Terms: Mexico gives up California, Utah, New Mexico, Arizona; Rio Grande established as the southern boundary of Texas.

United States pays Mexico $15,000,000.

The war was forced by the southern element anxious for more slave territory, very unpopular in the north.

Re-establishment of the sub-treasury; Acquisition of Oregon by the settlement of the north-west boundary (49th parallel); Tariff lowered; Gold in California; Wilmot proviso; Election of Taylor and Fillmore by the Whigs.

STATES ADMITTED—Wisconsin, 1843; Iowa, 1846.

INVENTIONS—Sewing machine, Elias Howe.

ZACHARY TAYLOR, Louisana.

1849–1 year and four months.

VICE-PRESIDENT—Millard Fillmore.

SECRETARY OF STATE—John M. Clayton.

IMPORTANT EVENTS—California applies for admission as a free state; Compromise of 1850; Admission of California, 1850.

MILLARD FILLMORE, New York.

1850-1853–2 years and 8 months.

SECRETARIES OF STATE—Daniel Webster and Edward Everett.

IMPORTANT EVENTS—Fugitive slave law: Reduction of postage; Department of Interior organized, 1849.

FRANKLIN PIERCE, New Hampshire.

1853-1857.

VICE-PRESIDENT—William R. King,

SECRETARY OF STATE—William R. Marcy.

IMPORTANT EVENTS—Pierce elected by the Democrats; World's Fair held at New York; Japan opened to American commerce; Uncle Tom's Cabin; Kansas and Nebraska bill, (Squatter sovereignty); American party, (Know-nothing party); Gadsden purchase, $10,000,000; Ostend manifesto; Trouble in Kansas over slavery; Republican party organized on the platform that slavery should be kept out of the territories; Democrats elect Buchanan president.

JAMES BUCHANAN, Pennsylvania.

1857-1861.

VICE-PRESIDENT—J. C. Breckenridge.

SECRETARIES OF STATE—Lewis Cass, Jeremiah S. Black.

IMPORTANT EVENTS—Dred Scott decision; Trouble with the Mormons; Panic of 1857; Atlantic cable laid, 1858; John Brown at Harper's Ferry, 1859; Discovery of oil in Pennsylvania; Discovery of gold and silver in Colorado and Nevada; Election of 1860 (four parties); Their platforms:—Northern Democrats, Squatter sovereignty; Southern Democrats, all territories must be open to slavery; Republican, slavery must be kept out of the territories, Constitutional Union party dodged the slavery issue; Republicans elected Lincoln; South Carolina secedes, followed by Mississippi, Florida, Alabama, Georgia, Louisana, Texas; Southern Confederacy organized.

STATES ADMITTED—Minnesota, 1858; Oregon, 1859; Kansas, 1861.

ABRAHAM LINCOLN, Illinois.

1861-1865—4 years and 1 month.

VICE-PRESIDENTS—Hannibal Hamlin, Andrew Johnson.

SECRETARY OF STATE—William H. Seward.

SECRETARY OF TREASURY—Salmon P. Chase and others.

SECRETARY OF WAR—Edwin M. Stanton.

SECRETARY OF NAVY—Gideon Wells.

IMPORTANT EVENTS—Civil War, 1861–1865.

CAUSE—Secession of the Southern States. War was fought to settle questions of States' rights. The slavery issue was what brought it about.

EVENTS—

1861—Fort Sumpter, April 16th; Secession completed—Virginia, Arkansas, North Carolina and Tennessee; The call for volunteers; Baltimore mob; The blockade begun; Battle of Bull-Run; Trent affair; Army of the Potomac organized under McClellan.

1862—Union plans. Hold the Potomac and take Richmond; Complete the blockade; Open Mississippi; Movements in the west; Grant at Forts Henry and Donelson; Battle of Shiloh; Capture of Island No. 10; Western Tennessee in the hands of the North; Monitor and Merrimac; Capture of New Orleans (Farragut); The Peninsular campaign—the army of the Potomac defeated; Lee moves north; Second battle of Bull-Run; Lee invades the north, met by McClellan at Antietam, retreats south; McClellan removed; Army of the Potomac under Burnside fights the battle of Fredricksburg, north defeated; Murfreesboro, defeat for the South; Eastern Tennessee in the hands of the North.

1863—Emancipation proclamation. The army of the Potomac under Hooker; Battle of Chancellorsville; Lee invades the North; Army of the Potomac under Meade meets Lee at Gettysburg—Lee defeated; Vicksburg surrenders to Grant; Battle of Chickamauga; Morgan's raid.

1864—Atlanta captured; Sherman goes from Atlanta to Savannah; Grant at the head of the northern armies; movement on Richmond; Early's Raid; Battle of the Wilderness; Cold Harbor; Petersburg; Mobile captured; The Alabama destroyed by the Kearsarge.

1865—Lee surrenders, April 9th; Lincoln assassinated; Army disbands.

RESULTS—Union restored, slavery abolished, States' Rights question settled.

ANDREW JOHNSON, Tennessee.

1865-1869—3 years and 11 months.

SECRETARY OF STATE—Wm. H. Seward.

IMPORTANT EVENTS—International ocean telegraph; Provisional government in the South; Thirteenth amendment; Freedmen's Bureau; Reconstruction Acts; Impeachment of the President; Department of Education; Amnesty proclamation; Fourteenth amendment; Alaska purchased, ($7,200,000.)

STATES ADMITTED—Nebraska, 1867.

ULYSSES S. GRANT, Illinois.

1869 1877.

VICE-PRESIDENTS—Schuyler Colfax, Henry Wilson.

SECRETARY OF STATE—Hamilton Fish.

IMPORTANT EVENTS—Expatriation; Pacific railroad; Reconstruction completed; Fifteenth amendment; Ku-Klux Klan; Chicago fire; Alabama claims, ($15,500,000); The Liberal Republicans; Panic of 1873; Weather Bureau; Salary grab; Whiskey frauds; Resumption Act, passed 1875, to take effect in 1879; Centennial Exhibition; Invention of the telephone.

STATES ADMITTED—Colorado, 1876.

Election of Hayes—dispute over election returns, commission appointed to decide disputes.

RUTHERFORD B. HAYES, Ohio.

1877-1881.

VICE-PRESIDENT—Wm. A. Wheeler.

SECRETARY OF STATE—Wm. M. Evarts.

IMPORTANT EVENTS—Silver Bill of 1878; Railroad strikes; Yellow fever epidemic; Resumption of specie payment.

JAMES A. GARFIELD, Ohio.

1881—6 months and 15 days.

VICE-PRESIDENT—Chester A. Arthur.

SECRETARY OF STATE—James G. Blaine.

IMPORTANT EVENTS—Assassination of Garfield.

CHESTER A. ARTHUR, New York.

1881 1885.

SECRETARY OF STATE—Fredrick T. Frelinghuysen.

IMPORTANT EVENTS—The Anti-Polygamy Bill; Civil Service Act; Brooklyn bridge; Standard time; New Orleans cotton exposition; Cleveland elected by the Democrats.

GROVER CLEVELAND, New York.

1885-1889.

VICE-PRESIDENT—Thomas A. Hendricks.

SECRETARY OF STATE—Thomas F. Bayard.

IMPORTANT EVENTS—Presidential Succession Act; The Electoral Count Act; Inter-State Commerce Act; Chinese exclusion; Anarchist riots in Chicago; Charleston earthquake, Mills Bill; Election of Harrison by the Republicans.

BENJAMIN HARRISON, Indiana.

1889-1893.

VICE-PRESIDENT—Levi P. Morton.

SECRETARIES OF STATE—James G. Blaine, John W. Foster.

IMPORTANT EVENTS—Opening of Oklahoma; Johnstown flood; Pan-American Congress; McKinley Tariff; Reciprocity; Anti-Lottery Bill; Inter-State Commerce; Sherman Silver Bill; World's Fair Bill; International copyright; Behring Sea fisheries; Ballot Reform (Australian ballot system), adopted by 37 states by 1892; Columbian exposition; Election of Cleveland.

STATES ADMITTED—North Dakota, South Dakota, Montana, Washington, 1889; Idaho, Wyoming, 1890.

GROVER CLEVELAND, New York.

1893-1897.

VICE-PRESIDENT—Adlai E. Stevenson.

SECRETARIES OF STATE—Walter Q. Gresham, Richard Olney.

IMPORTANT EVENTS—Behring Sea arbitration; Repeal of the Sherman Act; Panic of 1893; Revolution in Hawaii; Applies for annexation to the United States; Wilson Bill; Income Tax, (declared unconstitutional by the Supreme Court); Railroad strikes; Coxey's army; Anti-Lottery Bill; Atlanta Exposition; Wm. McKinley elected President; Venezuelan boundary.

STATES ADMITTED—Utah, 1896.

WILLIAM McKINLEY, Ohio.

1897-189-.

VICE-PRESIDENT—Garret A. Hobart.

SECRETARIES OF STATE—John Sherman, William Day, John Hay.

IMPORTANT EVENTS—Dingley Tariff Bill; Spanish-American War.

CAUSE—Inability of Spain to establish order in Cuba; Spanish cruelty, (Reconcentrado system.)

EVENTS—

President's war message, April 11, 1898.

Congress authorized President to make war, April 19.

Blockade of Cuba declared, April 22.

Dewey destroys Spanish Fleet at Manila, May 1, 1898.

Cevera's Fleet shut in the harbor of Santiago de Cuba, May 19.

Oregon arrives at Key West from San Francisco, May 24.

Hobson sinks the Merrimac, June 3, unsuccessful in blocking the harbor of Santiago.

War Revenue Bill, June 13.

Battle of El Caney, July 1.

Destruction of Cevera's Fleet, July 3.

Surrender of Santiago, July 17.

Porto Rico invaded, July 25.

Manilla captured, August 16.

Treaty signed by Commissioners, December 10, 1898.

TERMS—Spain relinquishes all sovereignty over Cuba; Cedes to the United States Porto Rico and other Spanish West Indies, also the Philippines. United States to pay Spain $20,000,000.

POLITICAL PARTIES IN THE UNITED STATES.

1. The reason for the existence of political parties lies in human nature. Men are so constituted that they see the same thing differently. With the same object in view they will seek it by different ways.

2. ARISTOCRACY VS. DEMOCRACY. From earliest times wherever this liberty has been allowed, political parties have existed. Greece and Rome had political parties, usually divided on the question of aristocratic or popular government.

3. In the American Colonies from earliest times two parties contended, one favoring aristocratic, and the other popular government. Bacon's Rebellion.

4. WHIGS AND TORIES. About 1700 these parties became a reflex of parties in England. The aristocratic was called Tory, the popular called Whig.

The Revolution was the destruction of the Tory party.

5. STRONG VS. WEAK CENTRAL GOVERNMENT. On the question of what sort of government the United States should adopt, parties again formed. Some believed in a strong central government like England's. Some in strong state governments.

The Articles of Confederation, based on the latter idea, proved a failure. In a convention called to amend the Articles of Confederation the strong-central-government party won and the constitution was drafted.

6. FEDERALISTS AND ANTI-FEDERALISTS. On the question of adoption of the constitution the people divided into two parties; Federalists favoring, Anti-Federalists opposing. Madison, Jay, Hamilton, Washington and Franklin, leaders of Federalists; Henry and Samuel Adams, chief leaders of Anti-Federalists. The government set in motion by Federalists.

7. LOOSE VS. STRICT CONSTRUCTION. Human language is ambiguous. There is the spirit and there is the letter of the law. It would be natural that the new constitution, which was a series of compromises, should be differently understood by men of opposing view. Article I, Section 8, and especially paragraph 18, has been the battle ground since the constitution was adopted. Anti-strong-central-government men interpreted it literally; hence called strict constructionists —Anti–Federalists. Strong–central–government men interpreted it freely, hence called loose-constructionists—Federalists.

Assumption of state debts, United States Bank, Jay's Treaty, attitude toward England and France, were dividing questions.

Wealth, culture and commercial interests were Federalist, strength in the north and east; Industrial classes Anti-Federal, strength in south and west. Federal leaders, Hamilton, J. Adams, Jay, Knox; Anti-Federal, Jefferson, Madison.

8. DEMOCRATIC-REPUBLICANS, About 1789 the Anti-Federalists, to show their sympathy with the French Revolution, called themselves Democratic-Republicans, finally Republicans.

9. FALL OF THE FEDERALISTS. Alien and Sedition Laws. Adam's Administration, 1797–1801. Virginia and Kentucky resolutions.

10. Republicans in Power. Jefferson president, 1801-1809. Violates strict construction principle by purchase of Louisiana and Embargo Act.

11. Madison President. Death of Federal party. The Hartford convention (1814). Republicans recharter United States Bank, thus adopting Federal principles.

12. Era of Good Feeling. Monroe president, 1817-1824. Republicans favor national roads and canals and protective tariff—loose construction principles.

13. Rise of National Republican and Democratic Parties. Republicans divide into two wings—one loose construction, led by Clay and J. Q. Adams; the other strict construction; two rival leaders, Jackson and Crawford. 1824 Adams becomes president. His party called National Republicans. The Jackson men came to be called Democrats. So known to-day.

14. Anti-Masonic Party. 1826 Wm. Morgan case, Anti-Masonic spirit develops into a party. Held the first national convention 1832. All parties followed. Soon died.

15. Formation of an Abolition Party, opposed to slavery, 1833. Name changed to Liberty Party. Made presidential nomination in 1839.

16. Democrats in Power. Jackson, 1829–1837. Oppose United States Bank. Oppose nullification. Specie circular. Spoils system. Favor internal improvements. 1835, National Republicans change name to Whigs; Clay and Webster, leaders.

17. Van Buren, Democrat, sub-treasury system.

18. Whig Triumph. Harrison and Tyler, 1841-1845. Tyler vetoes United States Bank Bill.

19. From the time of the war with Mexico to the Civil war the slavery question became more and more the dividing line in politics. The Wilmot Proviso, 1846, aroused the question of slavery.

20. The Free Soil Party, 1848. Its principle: No more slave territory. Came into existence because neither Whigs nor Democrats would adopt the Wilmot Proviso; joined by the Liberty party. Compromise of 1850 quieted for a time the slavery discussion.

21. Anti-Nebraska Men—Republican party. The Kansas and Nebraska Bill repealing the Missouri Compromise awakened the slavery question and destroyed the Whig party. Northern Whigs left their party and were

called Anti-Nebraska men. Southern Whigs joined the Democratic party. By 1856 the Anti-Nebraska men took the name of Republicans.

22. KNOW-NOTHINGS—American party, 1852. Origin of name. Principles: America for Americans; naturalization only after 21 years. Nominated presidential candidate in 1856.

23. In 1856, Whigs, Democrats, American and Republican parties made nominations. All anti-slavery sentiment joined the Republicans.

24. 1857. The Dred Scott Decision divided the Democratic party, and drove the Whig party into the Republican.

25. 1860. Four parties made nominations:

Northern Democrats—Squatter Sovereignty; strict construction.

Southern Democrats—Pro-Slavery; strict construction.

American—Dodging the slavery question.

Republicans—No extension of slavery; loose construction.

26. Since 1860 the Democratic and Republican parties have been chief opponents. From 1860–1872 the dividing questions were the war and reconstruction, then financial and the tariff question.

27. Liberal Republicans. 1870, Republican party in Missouri split, part calling themselves Liberals. Cause: Fear of too much exercise of Federal power in local matters. By 1872 a national party had formed, nominating Horace Greely for president. Democratic party ratified Liberal platform and candidates.

28. 1876. Independent National party (Greenback). Principles: Opposition to specie resumption (1874).

29. 1880. Independent National party had taken the name of Greenback—Labor National. Principles: Government control of money (anti-national banks), opposition to grant of land to railroads, and Chinese immigration. Democratic party, strict construction, revenue tariff; Republicans, protective tariff.

30. 1884. Republican, Democratic, National or People's (Greenback), and Prohibition parties in the field. Woman Suffrage and American Alliance parties also made nominations. No distinct issue divided the Democrats and Republicans and the campaign was one of personal abuse.

31. 1888. Nominations made by Democrat, Republican, Prohibition, Equal Rights, Union Labor, United Labor and American parties. The Greenback party had split. Principles not much changed from 1884.

32. 1892. Chief parties: Democrat, Republican, Prohibition and People's parties.

33. The opening of the mints to the free and unlimited coinage of silver at the ratio of one ounce of gold to sixteen of silver was the issue. Old party lines were broken. Republicans opposed silver and were aided in the election by "Gold Democrats." The Democratic and Populist parties united and favored silver, and were reinforced by "Silver Republicans." Several Union parties made nominations. The Republican ticket was elected.

AUTHORITIES: "American Politics"—*Alexander Johnston*—Henry Holt & Co., New York. "History of Presidential Elections"—*Edward Stanwood*—Houghton, Mifflin & Co., Boston and New York.

OUTLINE OF SLAVERY IN THE UNITED STATES.

INTRODUCTION INTO VIRGINIA—1619.

SLAVERY IN THE COLONIES—Massachusetts, Pennsylvania, Virginia, South Carolina.

Colonial Anti-Slavery Societies.

Slave trade.

FIRST CONTINENTAL CONGRESS—1774, agreed not to import slaves.

DECLARATION OF INDEPENDENCE—Jefferson had accused England of not allowing us to stop the importation of slaves. Clause stricken out because the Southern Colonies were desirous of continuing the importation.

Continental Congress (1777), movement to do away with slavery.

Northern States emancipate slaves (1780–1804).

EFFECT OF THE REVOLUTIONARY WAR—Slavery becoming unpopular on account of the Revolutionary discussion of "the rights of man."

Virginia, Maryland and Deleware prohibit importation of slaves.

The Ordinance of 1787—result of these same discussions.

Compromises of the Constitution in regard to representation, direct taxes and the importation of slaves.

Provision in the Constitution for the return of fugitive slaves.

Fugitive slave laws passed by Congress, 1793.

Missouri Compromise, 1820.

Rise of the Abolitionists, 1831—Garrison, Phillips, Whittier.

"Gag Resolutions," 1836–1844.

Nat Turner Insurrection.

Annexation of Texas, 1845.

Mexican War, 1846–1848.

Wilmot Proviso, 1846.

Free Soil party, 1848.

Compromise of 1850.

Squatter Sovereignty—Repeal of the Missouri Compromise, 1854.

Formation of the Republican party, 1856.

Dred Scott Decision, 1857.

Extension of slavery becomes a party issue.

Election of Lincoln, 1860.

Secession, 1860–1861.

Emancipation proclamation, 1863.

Thirteenth Amendment, 1865.

STATES' RIGHTS AND SECESSION.

MOVEMENTS, NORTH AND SOUTH, AGAINST THE POWER OF THE GENERAL GOVERNMENT—

1. Whiskey Rebellion—Western Pennsylvania. Threats of secession—United States laws disregarded for three years, 1791–1794.

2. Kentucky and Tennessee threaten secession if the United States does not gain control of the mouth of the Mississippi.

3. Virginia and Kentucky Resolutions written by Madison and Jefferson, and adopted by the legislatures of the above named states, suggest "nullification."

4. Timothy Pickering, a leading New England Federalist, suggests that New England withdraw from the Union in 1803, on account of the purchase of Louisana.

5. New England openly talks nullification and secession during the Embargo, 1807.

6. In a speech in the House of Representatives, Josiah Quincey of Massachusetts said (1811) that if Louisana were admitted as a state that it would be the right and duty of some of the states (meaning New England) "to prepare definitely for a separation—amicably if they can, violently if they must."

7. In the War of 1812 the New England States refuse the United States the aid of their state militia. Threaten secession.

8. Hartford Convention, 1814. Strongly States' Rights. Propose amendments to the constitution, implying secession if they are not adopted.

9. Missouri Compromise, 1820, South threaten secession.

10. Nullification, 1828–1832. Threats of secession.

11. 1843. John Q. Adams says that the annexation of Texas would result in and justify disunion. The South says, "Texas or disunion."

12. Secession of Southern states, 1860–1861.

NOTE.—It is evident that up to the Civil War it was the custom of different sections of the country to interpret the Constitution according to their local interests.

PROMINENT DATES IN UNITED STATES HISTORY.

1001	Leif Ericson discovered Vinland.
1492	Columbus discovered West Indies, Oct. 12.
1497	Cabots discover the coast of North America.
1498	Columbus discovered continent of South America; 3rd voyage.
1513	DeBalboa discovered the Pacific Ocean.
1519–21	Cortez conquers Mexico.
1534	Cartier visits Canada.
1541	DeSoto discovered the Mississippi River.
1565	St. Augustine founded by Menendez.
1607	Jamestown founded.
1609	Hudson River discovered.
1620	Landing of the Pilgrims.
1636	Roger Williams settled in Rhode Island.
1643	Union of New England Colonies.

1689–97	King William's War.
1754–63	French and Indian War.
1765	Parliament passed the Stamp Act.
1767	Parliament taxed tea, glass, lead, etc.
1774	First Continental Congress met in Phila., Sept. 5.
1775	Second Continental Congress met in Phila., May 10.
1776	Declaration of Independence was adopted, July 4.
1778	Treaty with France.
1783	Treaty of Paris.
1787	Adoption of the Constitution, by Convention. Ordinance of 1787.
1789	Washington inaugurated, April 30.
1795	Jay's Treaty.
1803	Louisana purchased.
1812	War declared against Great Britain, June 19.
1814	Hartford Convention.
1819	Florida purchased.
1820	Missouri compromise passed, March 3.
1823	Monroe Doctrine announced.
1832	Nullification in South Carolina.
1837	Michigan admitted into the Union, Jan. 26.
1845	Texas annexed.
1850	Omnibus Bill.
1857	Dred Scott decision.
1860	South Carolina seceded, Dec. 20.
1861–65	Civil War.
1863	Emancipation Proclamation issued.
1867	Reconstruction.
1883	Civil Service Act.
1898–99	Spanish-American War.

CIVIL GOVERNMENT.

KINDS OF GOVERNMENT.

PATRIARCHAL. THEOCRATIC.

MONARCHY—

Absolute; Limited; Hereditary; Elective.

ARISTOCRACY. DEMOCRACY—

Pure Democracy; Republic.

NATIONAL GOVERNMENT.

Constitution Ratified July 26, 1788.

DEPARTMENTS—Executive; Legislative; Judicial.

EXECUTIVE DEPARTMENT.

President.

TERM—Four years.

ELIGIBILITY—Native-born citizen; Thirty-five years of age; Fourteen years a resident of the United States.

How ELECTED—Electors; House of Representatives.

OATH. IMPEACHMENT.

SALARY—$50,000.

POWERS AND DUTIES—

Military: (*a*) Army and Navy; (*b*) Militia.

Civil: (*a*) Cabinet; (*b*) Reprieves; Pardons; (*c*) Treaties; (*d*) Appointments; (*e*) Messages; (*f*) Legislative; (*g*) Convene or adjourn Congress; (*h*) Receive foreign ministers; (*i*) Execute the laws; (*j*) Commission U. S. officers.

Vice-President.

TERM—Four years.

ELIGIBILITY—Native-born citizen; Thirty-five years of age; Fourteen years a resident of the United States.

HOW ELECTED—Electors; Senate.

OATH. IMPEACHMENT.

SALARY—$8,000.

POWERS AND DUTIES—President of Senate; President of United States.

Cabinet.

COMPOSED OF—Secretary of State; Secretary of the Treasury; Secretary of War; Secretary of the Navy; Secretary of the Interior; Postmaster-General; Attorney-General; Secretary of Agriculture.

SALARY OF EACH—$8,000 per annum.

LEGISLATIVE DEPARTMENT.

Vested in Congress.

COMPOSED OF—Senate and House of Representatives.

MEETS—First Monday in December each year.

Senate.

COMPOSED OF—Two members from each State.

ELIGIBILITY—Thirty years of age; Citizen of the United States nine years; Inhabitant of State.

TERM—Begins March 4; Lasts six years.

ELECTED—By Legislatures of the several States.

VACANCIES FILLED—By Governor; Legislatures.

POWERS AND DUTIES—

Legislative: With House.

Elective; (*a*) Officers; (*b*) Vice-President; Try impeachments; Executive.

SALARY—$5,000 per annum; Mileage, twenty cents per mile each way; $125 for stationery.

SENATORS FROM MICHIGAN—James McMillan, 1901; Julius C. Burrows, 1905.

House of Representatives.

COMPOSED OF—Three hundred and fifty-seven members

ELIGIBILITY—Twenty-five years of age; Citizen of the United States seven years; Inhabitant of State.

APPORTIONED—One for every 151,912 persons; Each State one.

TERM—Begins March 4; Lasts two years.

ELECTED—By the people; First Tuesday after the first Monday in November.

VACANCIES FILLED—By special election.

POWERS AND DUTIES—

Legislative: (*a*) With Senate; (*b*) Revenue; Impeachment.

Elective: (*a*) Officers; (*b*) President.

SALARY—Same as in Senate.

Expressed Power of Congress.

FINANCIAL—Raising money: (*a*) Taxes; (*b*) Duties; (*c*) Imports; (*d*) Excises; (*e*) Borrow.

PURPOSES—(*a*) Payment of United States debts; (*b*) Common defence; (*c*) General welfare.

REGULATE COMMERCE—Foreign nations; Among States; Indians.

NATURALIZATION AND BANKRUPTCY—

COMMERCIAL—

Coin money.

Regulate Value: (*a*) Domestic; (*b*) Foreign.

Fix standard of weights and measures.

CRIMINAL—

To define and punish: (*a*) Piracies; (*b*) Felonies on high seas; (*c*) International offenses.

To provide for punishment of counterfeiting: U. S. securities; U. S. coin.

ESTABLISH POSTOFFICES AND POST ROADS.

GRANT—Copyrights; Patents.

ESTABLISH INFERIOR COURTS.

RELATIVE TO WAR—

Declaration; Letters of marque and reprisal; Rules of capture; Raise and support armies; Provide and maintain navy; Make rules for army and navy.

Call out militia: (*a*) To execute laws; (*b*) Suppress insurrections; (*c*) Repel invasions.

Control Militia: (*a*) Organize; (*b*) Arm; (*c*) Discipline; (*d*) Govern—when in U. S. service.

EXCLUSIVE LEGISLATION OVER—District of Columbia; Forts, magazines; etc.

JUDICIAL DEPARTMENT.

VESTED IN—One supreme court; inferior courts.

JUDICIARY OF THE UNITED STATES.

Supreme Court.

NAME.	APPOINTED FROM.
Chief Justice Melvin W. Fuller	Illinois, 1888.
Justice John M. Harlan	Kentucky, 1877.
Justice Horace Gray	Massachusets, 1881.
Justice David J. Brewer	Kansas, 1889.
Justice Henry B. Brown	Michigan, 1890.
Justice George Shiras, Jr	Pennsylvania, 1892.
Justice Edward D. White	Louisiana, 1894.
Justice Rufus W. Peckham	New York, 1895.
Justice Joseph McKerma	California, 1897.

Circuit Courts.

CIRCUIT.	STATES.	JUDGES.	APPOINTED FROM.
First	Me., Mass., N. H., R. I	Le Baron B. Colt	R. I.
		William L. Putman	Me.
		E. Henry Lacombe	N. Y.
Second	Vt., Conn., N. Y	William J. Wallace	N. Y.
		Nathaniel Shipman	Conn.
Third	N. J., Penn., Del	Marcus W. Acheson	Penn.
		George M. Dallas	Penn.
Fourth	Md., W. Va., Va., N. C., S. C	Nathan Goff	W. Va.
		C. H. Simonton	S. C.
Fifth	Ga., Fla., Ala., Miss., La., Tex	Don A. Pardee	La.
		A. P. McCormick	Tex.
Sixth	Mich., O., Ky., Tenn	William H. Taft	Ohio.
		Horace H. Lurton	Tenn.
Seventh	Ind., Ill., Wis	W. A. Woods	Ind.
		James G. Jenkins	Wis.
		John W. Showalter	Ill.
Eighth	Min., Ia., Mo., Ark., Neb., Col., Kan., N. Dak., S. Dak., Wy., Utah, N. Mex., Okla	Henry C. Caldwell	Ark.
		Walter H. Sanborn	Minn.
		Amos M. Thayer	Mo.
Ninth	Cal., Ore., Nev., Mont., Wash., Ida., Ariz., and Alaska	William B. Gilbert	Ore.
		Erskine M. Ross	Cal.

Court of Claims.

NAME.	APPOINTED FROM.
Chief Justice Charles C. Nott	New York.
Judge Lawrence Weldon	Illinois.
Judge John Davis	Dist. of Columbia.
Judge Stanton J. Peele	Indiana.
Judge Charles B. Howry	Mississippi.

JUDGES—

Appointed by President and Senate; Tenure of office during good behavior.

SALARIES: (*a*) Chief justice, $10,500; (*b*) Associate Justices, $10,000; (*c*) Circuit Judges, $6,000; (*d*) Judges of Court of Claims, $4,500; (*e*) District Judges, $3,500—$5,000.

JURISDICTION—Original; Appellate.

PROHIBITIONS OF CONGRESS.

WRIT OF HABEAS CORPUS—Rebellion; Invasion.

COMMERCIAL—Export duties; Preference of ports.

FINANCIAL—Paying money without appropriation.

Receiving from foreign power: (*a*) Present; (*b*) Emolument; (*c*) Office; (*d*) Title.

CRIMINAL—Bill of attainder; Ex-post facto law.

ON STATES.

COMMERCIAL—Import duties; Export duties; Tonnage duties; Law impairing contracts.

CRIMINAL—Bill of attainder; Ex-post facto law.

MONEY—Coin; Bills of credit; Legal tender.

WAR—Letters of marque and reprisal; Troops of war vessels; Engage in war.

NOBILITY—

AMENDMENTS—First: Liberty of speech; Of press; Of religion; Of right to petition.

Second: Right to keep and bear arms.

Third: Quartering soldiers.

Fourth: Search warrants.

Fifth and Sixth: Rights in criminal cases.

Seventh: Jury trial where controversy exceeds twenty dollars.

Eighth: Excessive bail; Fines; Punishment.

Ninth: Rights retained by people.

Tenth: Powers reserved to states or people.

Eleventh: Judicial jurisdiction.

Twelfth: Election of President and Vice-President.

Thirteenth: Slavery; Involuntary servitude.

Fourteenth: Civil Rights; Representatives; Disabilities; Debt.

Fifteenth: Suffrage

CENSUS OF THE UNITED STATES—First, 1790, 3,929,328; Second, 1800, 5,305,925; Third, 1810, 7,239,814; Fourth, 1820, 9,638,131; Fifth, 1830, 12,866,026; Sixth, 1840, 17,069,453; Seventh, 1850, 23,191,876; Eighth, 1860, 31,443,221; Ninth, 1870, 38,558,371; Tenth, 1880, 50,152,866; Eleventh, 1890, 62,831,900.

TIME FOR HOLDING STATE AND TERRITORIAL ELECTIONS.

STATES AND TERRITORIES.	Salary of Governor	TIME OF GENERAL ELECTION.
Alabama	$3,000	First Monday in August.
Alaska Territory	3,000	
Arizona Territory	2,600	Tuesday after first Monday in November.
Arkansas	3,000	First Tuesday in September.
California	6,000	Tuesday after first Monday in November.
Colorado	5,000	" " " " " "
Connecticut	4,000	" " " " " "
Delaware	2,000	" " " " " "
Florida	3,500	" " " " " "
Georgia	3,000	First Wednesday in October.
Idaho	3,000	Tuesday after first Monday in November.
Illinois	6,000	" " " " " "
Indiana	5,000	" " " " " "
Iowa	3,000	" " " " " "
Indian Territory	1,500	" " " " " "
Kansas	3,000	" " " " " "
Kentucky	6,500	First Monday in August.
Louisiana	4,000	Tuesday after third Monday in April.
Maine	2,000	Second Monday in September.
Maryland	4,500	Tuesday after first Monday in November.
Massachusetts	8,000	" " " " " "
Michigan	4,000	" " " " " "
Minnesota	5,000	" " " " " "
Mississippi	3,500	" " " " " "
Missouri	5,000	" " " " " "
Montana	5,000	" " " " " "
Nebraska	2,500	" " " " " "
Nevada	4,000	" " " " " "
New Hampshire	2,000	" " " " " "
New Jersey	10,000	" " " " " "
New Mexico Territory	2,600	" " " " " "
New York	10,000	" " " " " "
North Carolina	3,000	" " " " " "
North Dakota	3,000	" " " " " "
Ohio	8,000	" " " " " "
Oklahoma Territory	2,600	" " " " " "
Oregon	1,500	First Monday in June.
Pennsylvania	10,000	Tuesday after first Monday in November.
Rhode Island	3,000	First Wednesday in April.
South Carolina	3,500	Tuesday after first Monday in November.
South Dakota	2,500	" " " " " "
Tennessee	4,000	" " " " " "
Texas	4,000	" " " " " "
Utah	2,000	First Monday in August.
Vermont	1,500	First Tuesday in September.
Virginia	5,000	Tuesday after first Monday in November.
Washington	4,000	" " " " " "
West Virginia	2,700	" " " " " "
Wisconsin	5,000	" " " " " "
Wyoming	2,500	" " " " " "

DIPLOMATIC MINISTERS—To France, German Empire, Great Britain, Russia, Mexico, salary, $17,500; to Austria, Brazil, China, Italy, Japan, Spain, salary $12,000; Belgium, Chili, Peru, Central American States, Turkey, salary $10,000; Argentine Republic, Hawaiian Islands, Norway and Sweden, Netherlands, Venezuela, Korea, Switzerland, Bermuda, Paraguay and Uraguay, Portugal, salary $7,500; Bolivia, Hayti, Liberia, Ecuador, Egypt, Persia and Siam, salary $5,000.

Pay of the Army and Navy of the United States.

ARMY.		NAVY.	
General	$13,500	Admiral	$13,000
Lieutenant-General	11,000	Vice-Admiral	9,000
Major-General	7,500	Rear-Admiral	6,000
Brigadier-General	5,500	Commodore	5,000
Colonel	4,500	Captain	4,500
Lieutenant-Colonel	4,000	Commander	3,500
Major	3,500	Lieutenant-Commander	2,800
Captain (mounted)	2,000	Lieutenant	2,400
Captain (not mounted)	1,800	Master	1,800
Regimental Adjutant	1,800	Ensign	1,200
Regimental Quartermaster	1,800	Chaplain	2,500
First Lieutenant (mounted)	1,600	Surgeon	2,800
First Lieutenant (not mounted)	1,500	Paymaster	2,800
Second Lieutenant (mounted)	1,500	Assistant-Surgeon	1,700
Second Lieutenant (not mounted)	1,400	Midshipman	1,000
Chaplain	1,500	Gunners	1,200

The Electoral Vote.

STATES.	VOTES.	STATES.	VOTES	STATES.	VOTES.
Alabama	11	Massachusetts	15	Oregon	4
Arkansas	8	Maryland	8	Pennsylvania	32
California	9	Michigan	14	Rhode Island	4
Colorado	4	Mississippi	9	South Carolina	9
Connecticut	6	Minnesota	7	Tennessee	12
Delaware	3	Missouri	17	Texas	15
Florida	4	Montana	3	Utah	3
Georgia	13	New Hampshire	4	Vermont	4
Illinois	24	Nebraska	8	Virginia	12
Indiana	15	Nevada	3	Washington	4
Iowa	13	New Jersey	10	West Virginia	6
Kansas	10	New York	36	Wisconsin	12
Kentucky	13	North Carolina	11	Wyoming	3
Louisiana	8	North Dakota	3		
Maine	6	Ohio	23	Total	447

ANNUAL SALARIES—Emperor of Russia, $8,250,000; Sultan of Turkey, $6,000,000; Emperor of Austria, $4,000,000; Emperor of Germany, $3,000,000; Queen Victoria (G. B.), $2,200,000. President of the United States, $50,000.

CIVIL GOVERNMENT OF MICHIGAN.

DEPARTMENTS.

EXECUTIVE—Governor; Assistants.

LEGISLATIVE—Senate, 32; House of Representatives, 100.

JUDICIAL—Supreme court; Inferior courts.

EXECUTIVE DEPARTMENT.

Governor.

ELIGIBILITY—Age, 30 years; Citizen of the United States five years; of State, two years.

SALARY—$4,000.

Assistant State Officers.

ELECTIVE—Secretary of State, salary $800; State Treasurer, salary $1,000; Auditor-General, salary $3,000; Commissioner of Land Office, salary, $800; Attorney-General, salary $800; Superintendent of Public Instruction, salary $1,000.

State Boards.

ELECTIVE—Regents, Eight members; term, 8 years.

Education: Three members; term, 6 years.

EX-OFFICIO—Auditors: Secretary of State, State Treasurer, Commissioner of Land Office.

Equalization: Lieutenant-Governor, Secretary of State, Auditor-General, State Treasurer, Commissioner of Land Office.

Canvassers: Secretary of State, State Treasurer, Commissioner of Land Office.

Circuit Judges.

No. of Dist.	Name.	Residence.
1	Guy M. Chester	Hillsdale.
2	Orville W. Coolidge	Niles.
3	Joseph W. Donovan	Detroit.
	Robert E. Frazier	Detroit.
	Morse Rohnert	Detroit.
	Wm. L. Carpenter	Detroit.
	Geo. S. Hosmer	Detroit.
	Byron S. Waite	Detroit.
4	Erastus Peck	Jackson.
5	Clement Smith	Hastings.
6	Geo. W. Smith	Pontiac.
7	Chas. H. Wisner	Flint.
8	Frank D. M. Davis	Ionia.
9	John W. Adams	Kalamazoo.
10	Byron A. Snow	Saginaw.
	Emmet L. Beach	Saginaw.
11	Joseph H. Steere	Sault Ste. Marie.
12	Albert T. Streeter	Calumet.
13	Frederick W. Mayne	Charlevoix.
14	Frederick J. Russell	Hart
15	Geo. L. Yaple	Mendon.
16	James G. Tucker	Mt. Clemens.
17	Alfred Wolcott	Grand Rapids.
	Willis B. Perkins	Grand Rapids.
18	Theodore F. Shepherd	Bay City.
19	James B. McMahon	Ludington.
20	Philip Padgham	Allegan.
21	Peter F. Dodds	Mt. Pleasant.
22	Edward D. Kinne	Ann Arbor.
23	Maine J. Connine	Oscoda.
24	Watson Brach	Lexington.
25	John W. Stone	Marquette.
26	Frank Emerick	Alpena.
27	Lewis G. Palmer	Big Rapids.
28	Clyde C. Chitenden	Cadillac.
29	George P. Stone	Ithaca.
30	Howard Wiest	Williamston.
31	Samuel W. Vance	Port Huron.
	Obrien J. Atkinson	Port Huron.
32	Norman W. Haire	Ironwood.
33	Frank Shepherd	Cheboygan.
34	Nelson Sharpe	West Branch.
35	Stearns F. Smith	Owosso.
36	John R. Carr	Cassopolis.

OTHER STATE OFFICERS AND CLERKS.

Executive Office—Private Secretary, $1,800; Executive Clerk, $1,500.

Department of State—Deputy Secretary of State, $2,000; Chief Clerk, $1,200; Executive Clerk, $1,100; Clerks in charge statistics, $1,100.

Treasury Department—Deputy State Treasurer, $2,000; Cashier, $1,500; Chief Clerk, $1,200; Bookkeeper, $1,200.

AUDITOR GENERAL'S DEPARTMENT—Deputy Auditor General, $2,000; State Accountant, $2,000; Private Secretary, $1,600; Chief Bookkeeper, $1,200; Chief Clerk, $1,200; Assistant Chief Clerk, $1,100.

STATE LAND OFFICE—Deputy Land Commissioner, $2,000; Chief Clerk, $1,200; Bookkeeper, $1,200; Draughtsman, $1,200.

DEPARTMENT PUBLIC INSTRUCTION—Deputy Superintendent, $2,000; Chief Clerk, $1,000.

OFFICE ATTORNEY GENERAL—Deputy Attorney General, $2,000.

INSURANCE DEPARTMENT—Deputy Commissioner, $1,500; Chief Clerk, $1,200.

COMMISSIONER OF RAILROADS—Deputy, $1,500; Mechanical Engineer, $1,500.

BUREAU OF LABOR STATISTICS—Deputy Commissioner, $1,500; Chief Clerk, $1,200.

BANKING DEPARTMENT—Deputy Commissioner, $2,000; Chief Clerk and Examiner, $1,500.

BOARD OF STATE AUDITORS—Secretary, $1,600; Engineer and Superintendent, $1,600.

STATE LIBRARY—Assistant Librarian, $900

DAIRY AND FOOD COMMISSIONER—Deputy Commissioner, $1,000; State Analyst, $1,200.

LEGISLATIVE DEPARTMENT.

Senate.

HOW COMPOSED—One from each district.

ELIGIBILITY—Citizen of the United States; Qualified elector; Inhabitant of county or district.

NUMBER OF MEMBERS—Thirty-two.

BY WHOM ELECTED—The people.

WHEN ELECTED—Tuesday following first Monday in November of every even year.

SALARY—Three dollars per day during regular session and for first twenty days of extra session, and nothing thereafter; also ten cents mileage each way, and $5 for stationery.

QUORUM—Majority of members, but a lesser number may adjourn from day to day, and compel the attendance of absent members.

SENATE POWERS—Legislative—with House; Judicial—impeachment; Elective—Senate officers; Executive.

House of Representatives.

HOW COMPOSED—One from each legislative district.

ELIGIBILITY—Citizen of the United States; Qualified elector; Inhabitant of district.

NUMBER OF MEMBERS—One hundred.

BY WHOM ELECTED—The people.

WHEN ELECTED—Tuesday following first Monday in November of every even year.

SALARY—Same as in Senate.

QUORUM—Same as in Senate.

HOUSE POWERS—Legislative—with Senate; Inquisitorial—impeachment; Elective—House officers.

JUDICIAL DEPARTMENT.

Supreme Court.

CHIEF JUSTICE—Claudius B. Grant, Marquette, term expires December 31, 1899.

ASSOCIATE JUSTICES—Robert M. Montgomery, Grand Rapids, term expires December 31, 1901; Frank A. Hooker, Charlotte, term expires December 31, 1903; Joseph B. Moore, Lapeer, term expires Dec. 31, 1905; Charles D. Long, Flint, term expires December 31, 1907.

Salary of Justices, $7,000.

CLERK—Charles C. Hopkins, Lansing, salary $300 and fees.

REPORTER—John A. Brooks, Lansing, salary $1,500.

CRIER—Moses R. Taylor, Lansing, salary, $2 per diem.

TERMS—Four annually, commencing on first Tuesday after first Monday in January, April, June and October.

County.

EXECUTIVE—Sheriff, fees; Clerk, salary and fees; Treasurer, salary and fees; Register of Deeds, fees; Prosecuting Attorney, salary; Surveyor, $4 per day and fees; Coroners (2), fees; School Commissioner, salary; School Examiners (2) $4 per day; Superintendents of Poor (3), salary fixed by Board of Supervisors.

JUDICIAL—Judges of Circuit Court.

TERM—6 years from January 1.

Township.

EXECUTIVE—Supervisor, $2 per day and fees; Clerk, $1.50 per day and fees; Treasurer, fees; School Inspectors (2) $1.50 per day; Highway Commissioner, $1.50 per day; Drain Commissioner, $1.50 per day; Overseers of Highway, $1 per day; Constables, (4) fees; Fence Viewers, $1 per day.

JUDICIAL—Justices of Peace, $1.50 per diem and fees.

LEGISLATIVE—Township meeting.

ELECTIONS—March, Dates variously fixed in different villages; April, first Monday each year; November, first Tuesday after first Monday.

ELECTIONS.	OFFICERS.	TERM OF OFFICE.
March	Village officers	One year.
April	Judges of Supreme Court	Ten years.
	Judges of Circuit Court	Six years.
	Township and city officers	One year.
	Justices of the peace	Four years.
	Drain Commissioners	Two years.
November	State executive officers	Two years.
	State Legislature	Two years.
	County officers	Two years.
	Probate Judge	Four years.

CONGRESSIONAL DISTRICTS OF MICHIGAN—

First District: Wards 1 to 11, and 13 and 15, City of Detroit.

Second District: Counties of Jackson—Lenawee—Monroe, Washtenaw and Townships of Brownstown, Canton, Ecorse, Huron, Monguagon, Plymouth, Romulus, Sumpter, Taylor, Van Buren and Wyandotte City of Wayne County.

Third District: Counties of Branch, Calhoun, Eaton, Hillsdale, Kalamazoo.

Fourth District: Counties of Allegan, Barry, Berrien, Cass, St. Joseph, Van Buren.

Fifth District: Counties of Ionia, Kent, Ottawa.

Sixth District: Counties of Genesee, Ingham, Livingston, Oakland, and Townships of Dearborn, Greenfield, Livonia, Nankin, Redford, Springwells of Wayne County, also 12th, 14th and 16th Wards of Detroit.

Seventh District: Counties of Huron, Lapeer, Macomb, Sanilac, St. Clair, and Townships of Grosse Point, and Hamtramck of Wayne County.

Eighth District: Counties of Clinton, Saginaw, Shiawassee, Tuscola.

Ninth District: Counties of Benzie, Lake, Leelanau, Manistee, Mason, Muskegon, Newaygo, Oceana, Wexford.

Tenth District: Counties of Alcona, Alpena, Arenac Bay, Cheboygan, Crawford, Emmet, Gladwin, Iosco, Midland, Montmorency, Ogemaw, Oscoda, Otsego, Presque Isle.

Eleventh District: Counties of Antrim, Charlevoix, Clare, Grand Traverse, Gratiot, Isabella, Kalkaska, Mecosta, Missaukee, Montcalm, Osceola, Roscommon.

Twelfth District: Alger, Baraga, Chippewa, Delta, Dickinson, Gogebic, Houghton, Iron, Keweenaw, Luce, Mackinac, Marquette, Menominee, Ontonagon, Schoolcraft.

Governors of Michigan.

TERRITORIAL—William Hull, 1805; Lewis Cass, 1814; George B. Porter, 1832; Stevens T. Mason, 1834; John S. Horner, 1835; Stevens T. Mason, 1835.

STATE—Stevens T. Mason, 1837–40; William Woodbridge, 1840–41; J. Wright Gordon (acting,) 1841–42; John S. Barry, 1842–46; Alpheus Felch, 1846–47; William S. Greenly (acting,) 1847–48; Epaphroditus Ransom, 1848–50; John S. Barry, 1850–52; Robert McClelland, 1852–53, Andrew Parsons, (acting,) 1853–55; Kinsley S. Bingham, 1855–59; Moses Wisner, 1859–61; Austin Blair, 1861–65; Henry H. Crapo, 1865–69; Henry P. Baldwin, 1869–73; John J. Bagley, 1873–77; Charles M. Crosswell, 1877–81; David H. Jerome, 1881–83; Josiah W. Begole, 1883–1885; Russell A. Alger, 1885–87; Cyrus G. Luce, 1887–1891; Edwin B. Winans, 1891–1893; John T. Rich, 1893–1897; Hazen S. Pingree, 1897.

GRAMMAR.

PARTS OF SPEECH—Nouns, Pronouns, Adjectives, Adverbs, Verbs, Prepositions, Conjunctions and Interjections.

Nouns.

COMMON—Abstract; Concrete.

PROPER.

COLLECTIVE.

PROPERTIES—Number; Singular; Plural.

Formation of plural.

1. s or es added to singular. 2. en added to singular. 3. Internal change. 4. Irregular ways; f to v and es added; es after o preceded by a consonant; y preceded by a consonant changed to i and es added; figures, letters, etc. have 's added. 5. Foreign plurals. 6. Plurals of compounds and groups of words.

Gender—Masculine; Feminine; Neuter.

Gender indicated by: 1. Termination. 2. Different words. 3. Composition (man-servant).

Case—Nominative; Possessive; Objective.

Rules for forming the possessive of: 1. Singular. 2. Plurals. 3. Compounds.

Declension.

Person—First; Second; Third. (Person is not recognized by many grammarians).

PARSING THE NOUN.

USES OF THE NOUN.

1. Subject of a verb.
2. Direct object.
3. Indirect object.
4. Objective complement.
5. Attribute complement.
6. Object of preposition.
7. Subject of an infinitive.
8. Possessive modifier.
9. In apposition.
10. Objective adverbial.
11. Independent by address.
12. Independent by pleonasm.
13. Independent in absolute phrase.

Pronouns.

Classification—Personal, relative, interrogative, indefinite, demonstrative.

Personal Pronouns—I, thou, you, he, she, it.

Compound Personal Pronouns—Mine, thine, his, hers, ours, yours, theirs.

Properties—Person, number, gender, case.

Relatives—Who, which, what (and their compounds), That, as, but.

Antecedent—What, and the compounds of what, who and which usually have no antecedent expressed. In such cases they are called by some grammarians, conjunctive pronouns, used simply to introduce clauses.

Interrogatives—Who, which, what.

Demonstratives—This, these, that, those.

Indefinites—

Distributives—Each, either, neither,
Numerals and Quantitatives—Few, all, etc.
Comparatives—Such, other.
Reciprocals—Each other, one another.

Parsing of Pronouns.

Adjectives.

Classification.

Qualifying—Proper.

Articles—Definite, indefinite.

Numerals—Cardinal, ordinal, fractional, multiplicatives.

Pronominal—Demonstratives, interrogatives, relatives, Indefinites: Distributives, quantitives, comparatives.

Comparison.

Degrees—Positive, comparative, superlative.

Methods of Comparison—

1. Suffixes—er, est.
2. Use of adverbs, more, most.
3. Irregular comparison—good, better, best.

Uses of Adjectives—

Attributive—"A beautiful day."
Appositional—"A day, beautiful and bright, has ended."
Predicative—"The day is beautiful."

Adverbial predicate—"He stood obstinate."
Factitive (objective complement) "They painted the house white."
Substantive—"The *brave* never die."

Verbs.

CLASSIFICATIONS—

Weak (Regular.)	Transitive.
Strong (Irregular.)	Intransitive.
Principal.	Complete.
Auxiliary.	Defective.
Impersonal.	
Copula.	

PRINCIPIAL PARTS—Present tense, past tense, perfect participle.

PROPERTIES—

Voice—Active, passive.
Mode—Indicative, subjunctive, imperative (some grammarians recognize the potential.)
Tense—Present, past, future, present perfect, past perfect, future perfect.
Person—First, second, third.
Number—Singular, plural.
Form—Common, progressive.

CONJUGATION.

SYNOPSIS—

There is a growing tendency among grammarians to restrict the term inflection to changes which the verb itself undergoes to indicate person, time, number and mode. The conjugation of a verb would be confined to changes made in the verb itself and would not include mode, tenses, etc., formed by verb phrases.

VERB PHRASES AND ILLUSTRATIONS—

Progressive verb phrases:—Am biting.
Passive verb phrases:—Have been bitten.
Future verb phrases:—Shall or will bite.
Emphatic verb phrases:—I *do* bite.
Conditional verb phrases:—I should bite.
Perfect tense verb phrases:—I have bitten.
Potential verb phrases:—I may bite.
Obligative verb phrases:—I must bite.

VERBALS—

Participles—progressive (present); perfect (past.)
Infinitives—root (usually precided by 'to'); participial (gerund.)

CHIEF PRINCIPAL USES OF PARTICIPIAL INFINITIVE—

Subject of verb.
Object of verb or infinitive.
Object of preposition.
Predicate nominative.
Apposition.

USES OF ROOT INFINITIVE—

Subject of a verb—To speak is difficult.
Object of a verb—I prefer to speak.
Predicate nominative—My desire is to speak.
Apposition—It is difficult to speak.
Object of preposition—He is about to speak.
Idiomatically with noun—He is the man to speak.
Idiomatically with verb—I came to speak.
Idiomatically with adjective—He is ready to speak.
Idiomatically with adverb—He is running too rapidly to speak.
Independently—To tell the truth, the day is hot.
Objective Complement (factitive predicate)—He requested me to go.

PARSING THE VERB.

Sentences.

CLASSIFICATION BY USE.

Declarative.
Imperative.
Interrogative.
Exclamatory (given by some.)

CLASSIFICATION ACCORDING TO CONSTRUCTION.

Simple.
Compound.
Complex.
Compound-Complex.

ELEMENTS.

Principal—Subject and Predicate.
Subordinate—Most phrases and clauses.
Independent—Nouns, infinitives, etc., used independently.

CLAUSES—Independent; Dependent.

Adjective. 1. Those introduced by relative pronouns; 2. Those introduced by relative adverbs (see adverbs.)

Adverbial. Adverbal clause may express time, number, place, reason, cause, condition, concession, purpose.

Noun. (Substantive.) Principal uses of noun clause—1. As subject; 2. As object; 3. Apposition; 4. Predicate Nominative (attribute complement); 5. Object of Preposition.

PHRASES.

CLASSIFICATION—

By structure—Prepositional, infinitive, participial.

By use—Substantive (noun). *Never You Mind* is a common expression.

Pronoun. Be true to *each other.*

Adjective. The house *by the mill.*

Adverbial. He stood *by the river.*

Verb. He *may have gone.*

Conjunctive. He does *as well as* he can.

Prepositional. He went *up to* the door.

ANALYSIS OF THE SENTENCE—

Adverbs.

CLASSIFICATION.

SIMPLE.

CONJUNCTIVE.

Simple—

Manner, sweetly.

Place or direction—There, hither.

Time—Never.

Number—Quantity, degree, many, much, almost.

Interrogative—Why.

Model. These modify the statement in general—I think, therefore, he is wrong.

Conjunctive—May introduce: 1. Adverbial clause. 2. Adjective clause. These called by some, Relative Adverbs (where, when, why, whence, whether, as). 3. Noun clause.

Responsives—Yes, No. These stand for entire sentences.

Properties—Degree—Positive, comparative, superlative.

Formed by—1. Suffixes—er—est; 2. Use of adverbs —More, Most.

Conjunctions.

CLASSIFICATION—

CO-ORDINATE.

SUBORDINATE.

Co-ordinate—Copulatives—Simply couple, You *and* I.
Alternatives—You *or* I.
Adversatives—The day is bright *but* cold.
Causal—Hence, Therefore, etc.
Correlatives—Either, ... Or, Neither, ... Nor.
Subordinate—Conjunctive adverbs, chiefly, (see adverbs.)
Phrases as Conjunctions—As Though, As well as, In order that, etc.

PARSING CONJUNCTIONS.

Prepositions.

CLASSIFICATION—

Simple—In, To, etc.
Derivative—Around, Across.
Compound—Notwithstanding.

PARSING PREPOSITIONS.

Interjections.

CLASSIFICATION ACCORDING TO IDEA EXPRESSED—

1. Indicating pain, sorrow—Ah ! Alas ! etc.
2. Indicating joy—Hurrah ! Ah ! Ah !
3. To secure silence—Hush, List.
4. Contempt—Sshaw, bah.
5. Interrogative Interjections—Eh ? Heh ?

PARSING INTERJECTIONS.

READING.

READING—The perusal, or the oral expression of written or printed composition.

OBJECTS OF—1. Training in thought-getting; 2. The power of adequate vocal expression.

ORTHOEPY—The proper utterance of words.

EXPRESSION—The conveyance of thought by the modulated voice.

GESTURE—Action or attitude used to express or enforce sentiment or emotion.

Orthoepy.

ARTICULATION—The art of uttering distinctly and justly the sounds and syllables forming a word.

SYLLABICATION—The process of dividing words into syllables.

ORTHOGRAPHY—Treats of the style, size, sound and combination of letters.

STYLE—Roman, Italic, Old English, Antique, German Text, Gothic, Full Face, Script.

SIZE—Pica, Small Pica, Long Primer, Bourgeois, Brevier, Minion, Nonpareil, Agate, Pearl, each having two forms, capital and small.

ACCENT—

1. A forcible stress of voice upon one syllable of a word to distinguish it from the others.
2. Primary accent—the more forcible stress of voice.
3. Secondary accent—the less forcible stress of voice.

Marks of Accent.

1 2—*Mon* - day, *in* - stinct, *dark* - ness, *fail* - ure.

1 *2*—Al - *ly*, ro - *mance*, dis - *course*, re - *tire*.

1 2 3—*A* - re - a, *ab* - so - lute, *pri* - ma - ry, *al* - ge - bra.

1 *2* 3—Ly - *ce* - um, re - *tir* - ing, ex - *ten* - sion.
1 2 *3*—In - tro - *duce*, ad - ver - *tise*, co - te - *rie*.
1 2 3 4—*A* - er - i - form, *pri* - ma - ri - ly, *leg* - is - la - ture.
1 *2* 3 4—Ac - *cli* - ma - ted, ar - *tif* - i - cer, py - *ram* - i - dal.
1 *2* 3 4 5—In - *ex* - pli - ca - ble, in - *ev* - it - a - ble, in - *com* - par - a - ble.
1 2 *3* 4 5—Par - lia - *ment* - a - ry, ex - tra - *trop* - i - cal.
1 2 3 4 5 *6* 7 8—In - com - pre - hen - si - *bil* - i - ty.

Articulation.

LONG VOWELS.		SHORT VOWELS.	
CHAR.	NAME	CHAR.	NAME
ē	long e	ĭ	short i
ẽ	tilde e	ŭ	short u
û	caret u	ĕ	short e
ā	long a	ă	short a
â	long flat a	ȧ	short Italian a
ä	long Italian a	ŏ	short o
ô	broad o	o͝o	short double o
ō	long o	DIPHTHONGS.	
o͞o	long double o	CHAR.	NAME
ī	long i	oi	diphthong oi
ū	long u	ou	diphthong ou

Consonants—Subvocal.

CHAR.		VALUE	NAME	CHAR.		VALUE	NAME
b	as in	but	b	v	as in	vine	v
d	" "	did	d	~~th~~	" "	this	th sub.
j	" "	jug	j	z	" "	zone	z
g̈	" "	gay	g	zh	" "	azure	zh

WEBSTER'S TABLE OF EQUIVALENTS.

ē = i̇	j = ġ	o͝o = ọ = u̇	oi = oy
ẽ = ī = ȳ	g = g̈	k = ~~c~~ = ~~c~~h	ou = ow
ā = e̱	z = s̱	f = ph	ū = ew
â = ê	ĭ = y̆	s = ç	n̄ = ng
ô = a̤	ŭ = ȯ	sh = ç̣h	x = ks
o͞o = ọ = u̇	ŏ = a̤	ī = ȳ	x̱ = gz

Consonants—Aspirate.

CHAR.	VALUE	NAME	CHAR.	VALUE	NAME
p as in	pay	p	f as in	fine	f
t " "	tin	t	th " "	thin	th (asp.)
ch " "	church	ch	s " "	say	s
k " "	kin	k	sh " "	shine	sh

Liquids.

CHAR.	VALUE	NAME	CHAR.	VALUE	NAME
l as in	low	l	r as in	ray	r
m " "	may	m	n " "	sing	underlined n
n " "	no	n			

CORRECT ARTICULATION ACQUIRED—

1. By an accurate knowledge of the elementary sounds.
2. By knowing the appropriate places for these sounds in words.
3. By applying this knowledge in all reading and speaking.
4. By drill on initial and terminal combinations.
5. By practice on difficult sentences.

ORGANS OF SPEECH—Lips, teeth, tongue and palate.

VOICE—Produced by the passage of air through the larynx.

VOWELS, VOCALS, OR TONICS—Those tones of voice which are unobstructed by the organs of speech.

SUBVOCALS, OR SUBTONICS—Those tones which are modulated by the organs of speech.

ASPIRATES, OR ATONICS—Those sounds which are produced by the breath alone.

SOUND—An elementary sound is one that cannot be divided.

LABIALS—Letters formed principally by aid of the lips—b, f, m, p, v, w, wh.

DENTALS—Letters formed principally by aid of the teeth—j, s, z, ch, sh, zh, c, g.

LINGUALS—Letters formed principally by aid of the tongue—d, l, n, r, t, y, th.

PALATALS—Letters formed principally by aid of the palate—k, q, x, ng, l, g.

DIACRITICAL MARKS—Are characters used to represent the various sounds of letters.

Syllabication.

SYLLABLE—One or more elementary sounds uttered by one impulse of the voice.

MONOSYLLABLE—A word of one syllable.

DISSYLLABLE—A word of two syllables.

TRISYLLABLE—A word of three syllables.

POLYSYLLABLE—A word of four or more syllables.

ULTIMATE—The last syllable of a word.

PENULT—The last syllable of a word but one.

ANTEPENULT—The last syllable of a word but two.

PREANTEPENULT—The last syllable of a word but three.

SPELLING—Is the naming of the letters of a word in their proper order.

A WORD—One or more syllables used as the sign of an idea.

Expression.

MODULATION—The variation of the voice in reading and speaking.

EMPHASIS—

1. A special stress of voice on one or more words of a sentence.
2. The vocal agencies used for emphasis are: First, slide; second, pause; third, pitch; fourth, force; fifth, time; sixth, quality.

KINDS OF EMPHASIS—1. Absolute; 2. Antithetic.

PERSONATION—The variation of the voice used to represent two or more persons as speaking.

PAUSES—The cessation of the voice in reading or speaking.

SLUR—A smooth gliding movement of the voice heard in reading or speaking.

MONOTONE—A sameness of tone or absence of inflection.

SUGGESTIONS FOR APPLYING EMPHASIS—

1. When a word introduces, or becomes an important part of a new idea it becomes emphatic.
2. When ideas are presupposed, or when they have been expressed or implied, words re-introducing them, unless repeated for emphasis, remain unemphatic.

SUBORDINATION—Emphasis is often enfeebled by a failure of the speaker to properly subordinate the words which immediately follow the one receiving the emphasis.

TRANSITION—The change from one character or style to another.

ATMOSPHERE—The pervading spirit, history and surroundings of literature.

Modulation.

PITCH—The elevation of the voice on the scale as heard in reading or speaking.

DIVISIONS OF PITCH—1. Low; 2. Middle; 3. High.

LOW PITCH—Any tone of voice lower than the common or natural manner.

MIDDLE PITCH—The tone of voice used in conversation; as, "How do you do."

HIGH PITCH—Any tone of voice higher than the common.

RATE (TIME)—The time of utterance in reading and speaking.

DIVISIONS OF TIME—1. Slow; 2. Moderate; 3. Rapid.

SLOW TIME—Used in expression of solemnity, devotion, etc.

MODERATE TIME—Used in conversation, narration or description.

RAPID TIME—Used in expression of joy, anger, excitement and haste.

SUGGESTION—Let the learner take especial pains in the examples of rapid movement not to jumble the words or sounds together. No matter how rapid the rate, the words must be pronounced with clearness and precision.

GROUPING—The pupil must be trained to get his ideas from the printed page in groups, and not in single words.

QUALITY—Refers to the kind of tone.

NORMAL (PURE TONE)—That used in common conversation.

OROTUND—The *pure tone* deepened and enlarged.

ORAL—Used to express feebleness, etc.

ASPIRATE—The whisper, or the whisper partly vocalized. Expresses secrecy, etc.

GUTTURAL—That in which the voice seems to be produced in the throat.

PECTORAL—Any tone below the natural compass of the voice.

NASAL—That in which the voice seems to pass through the nose.

FALSETTO—Any tone above the natural compass of the voice.

FORCE—Refers to the volume of sound without change of pitch.

DIVISIONS OF FORCE—Form, Degree, Stress.

DIVISIONS OF DEGREE—Subdued, Moderate, Energetic, Impassioned.

SUBDUED FORCE—Is less than the common energy of the voice.

MODERATE FORCE—That usually employed in conversation, narration, etc.

ENERGETIC FORCE—That next greater than the common energy of the voice.

IMPASSIONED FORCE—That used in the expression of revenge, defiance, etc.

STRESS—The manner of applying emphasis to one or more words of a sentence.

DIVISIONS OF STRESS—Radical, Final, Thorough, Median, Compound, Tremulous.

RADICAL STRESS—That in which the emphasis falls upon the beginning of a word and gradually diminishes.

FINAL STRESS—That in which the emphasis is gradually increased.

THOROUGH STRESS—That in which the emphasis commences, continues, and ends with the same force.

COMPOUND STRESS—That in which the emphasis is applied with the greatest force at the initial and final parts of the sound.

MEDIAN STRESS—That in which the emphasis is applied with the greatest force in the middle of the sound.

TREMULOUS (INTERMITTENT STRESS)—That in which the emphasis is applied in like impulses.

INFLECTION—The change of pitch used in reading and speaking.

RISING INFLECTION—That in which the voice glides upwards and suggests incomplete sense.

FALLING INFLECTION—That in which the voice glides downward and suggests complete sense.

CADENCE—The fall of the voice at the end of a sentence.

Pauses.

PAUSES SHOULD BE MADE—

(*a*) Before :
1. Relative Pronouns.
2. Conjunctions (conditionally.)
3. Adjectives and Adverbs following the words they modify.
4. Infinitive Phrases (conditionally.)
5. Prepositional Phrases (conditionally.)

(*b*) Between :
1. Words of a Series.
2. Words to mark an Elipsis.
3. Clauses :

(*c*) After :
1. Emphatic Words (conditionally.)
2. Words or Phrases used independently.
3. Nominative Phrases.
4. Intransitive Verbs (conditionally.)

(*d*) Before and After :
1. Any word or group of words expressing strong emotion.
2. Transposed Words and Phrases.
3. Words or Phrases used in Apposition.
4. Direct Quotations.
5. Parenthetical Expressions.

Gestures.

POSITIONS OF HAND—

Index—The forefinger extended, used in pointing.

Supine—The palm upward, information, advice, welcome, asking, etc.

Prone—The palm downward, secrecy, represses, rejects, shapes, etc.

Reflex—The palm turned inward and directed toward self.

Clasped—The palms are brought together, prayer, adoration, etc.

Averse—The hand at an angle with the forearm, repulsion, etc.

Clenched—The hand closed tightly. violence, anger, hate, revenge, etc.

THEORY AND ART OF TEACHING.

(SELECTED AND ARRANGED.)

THEORY AND ART OF TEACHING—The principles and methods of instruction.

DIVISION OF SUBJECT—Will here be used as (1) the *organization* and (2) the *management* of schools.

ORGANIZATION—The systematic arrangement of school work; having for its object the instruction and control of the schools.

A good organization of a school is an essential condition to its healthful management.

DIVISION—School organization may be divided as (1) temporary, and (2) permanent.

TEMPORARY ORGANIZATION—Includes (1) preparatory work, (2) examination, and (3) classification of pupils.

PREPARATORY WORK—Will be considered under the following: (1) The teacher, (2) the school, (3) contract, and (4) plan of work.

THE TEACHER—"As is the teacher, so is the school." The great want everywhere is competent teachers.

QUALIFICATIONS—(1) Health, (2) Knowledge, (3) Tact, and (4) Moral.

HEALTH—The teacher should be free from all bodily ailments. A strong, healthy, and temperate physical fibre is necessary to a healthy, growing mental condition.

There is no profession so exacting, none that breaks men and women down so early as that of faithful teaching.

"The cheerfulness, the vigor, the versatility, and the endurance essential to success can only come of good health."

KNOWLEDGE—To teach well, one must be a master of the subject. He ought also, to be conversant with cognate branches. The true teacher is always a student.

TACT—No word in our language expresses a greater power to the teacher than this *tact*. The ready power of appreciating and doing what is required by circumstances. The accumulation of knowledge and experience add to this original divine power. A knowledge of the laws of culture, of right methods of teaching, and of true school management quickens and deepens this gift of intuition.

"The most scholarly teachers often make the most striking failures; they know, but they cannot cause others to know. The teacher needs to observe, read, think, practice. He needs to sit at the feet of Jesus, of Aristotle, of Socrates, and of Pestalozzi, and learn lessons from the masters."

MORAL—High moral qualities are necessary in the teacher as they affect his power over his pupils.

The teacher is the architect of the character of his pupils.

The moral nature that is bound down by low and sensuous affections and purposes, lacks at all times that ready, sensitive, insinuating grace and freedom of action, which draw the youthful mind into ways of purity, temperance and personal excellence.

THE SCHOOL—Only engage in such schools as you can manage and hold.

Do not attempt too much. You can afford to work up. The best positions await talent and well directed effort. Prove yourself worthy the place, and the position will seek you. Seek that place which will require all your powers and to which you can gladly devote your best efforts.

THE CONTRACT—Teaching is a business, and teachers should meet School Boards on business principles. The contract should be in writing, and should specify time, wages, care of house, grounds and apparatus.

PLAN OF WORK—Prepare your *plan of work* carefully. Have and keep your school room clean, orderly and cheerful. Look after the minutest details which promise success. Give your best thoughts to the *course of study* and *program*. See that it is well arranged before you enter upon your work. Have your plans well matured before the first day. Do your best and you will not fail.

EXAMINATION—To determine the grade and class to which pupils belong, the method must be left to the judicious teacher.

The natural ability and attainments of the pupil must both be considered.

CLASSIFICATION—Here as in examination the judgment of the teacher must determine the place. The age, ability, and scholarship of the pupil must be considered. The proper place for each pupil should be found.

PERMANENT ORGANIZATION—Includes (1) opening exercises, (2) program, (3) study, (4) recitation, (5) intermission, and (6) closing exercises.

OPENING EXERCISES—These should be brief, pleasing, and directed toward moral culture. Do not have stereotyped forms for opening. Call the roll by number—each pupil announcing his number in order.

PROGRAM—A carefully prepared program should be found in every school room.

STUDY—The pupil is helped more by what he *thinks* himself than he is by what others tell him. The teacher should never do for the pupil what he can do for himself. Teach pupils *how* to study. Our success as teachers depends more upon this than any other school duty.

THE RECITATION—

1. Importance: (1) Its relation to control. A teacher who has good wide awake recitations will not have bad order. (2) The recitation brings pupils and teacher together in an intimate way. It affords the best opportunity for a teacher to get hold of the hearts of his pupils. (3) It is the final test of the teacher. If he fails here, his failure is fatal.
2. Purpose: (1) To test. *a.* The mental development of pupils. *b.* The preparation of the lesson. (2) To train. *a.* Mental powers, memory, imagination, observation, thinking. *b.* Habits of study and living. (3) To instruct. The teacher should take time to give the pupils instruction in methods of study and of preparing lessons. He should bring in material outside of texts used, and inspire the pupils with the purpose to make the most of their lives. Caution should be used lest one talk too much.

3. Conditions of a good recitation: (1) A true teacher. The teacher is the soul and life of the recitation. Too frequently the pupils are blamed for a poor recitation. The fault generally lies with the teacher. Pupils are interested and attentive when the physical conditions are right and the teacher is properly prepared for the recitation. (2) An actively interested class. A recitation that does not arouse the interest of all the pupils is a failure.

4. The true teacher is: (1) A prepared teacher. A prepared teacher knows: *a.* The lesson to be taught; *b.* The mental preparation of the class to receive the lesson; *c.* The method of presenting the lesson. The rule should be: Daily preparation for daily work. (2) A sympathetic teacher. Sympathy is the magic key which unlocks the heart of the child to the teacher. (3) An enthusiastic teacher. Enthusiasm means, God in the soul, i. e. a great enobling and inspiring principle has entered the soul.

5. An actively interested class is one that *works with* the teacher in contrast with one which watches the teacher work. This interest is marked by attention, pertinent questions and free expression of opinion.

6. Final suggestions: Form a high opinion of the value of the recitation Consider yourself responsible for its success or failure. Prepare for each recitation. Study the character of your pupils. Win them by sympathetic interest in them. Do not drive them but inspire them to effort. Do not close a recitation without having fixed some new truth definitely in the minds of the class.

INTERMISSION—The organization of the school should provide for and the program should show time set apart for recitation.

CLOSING EXERCISES—These, like the opening, should be brief, announcements should be short if any are to be made. A song, dismissal by rank, pupils marching in order.

SCHOOL MANAGEMENT—The systematic control of school work so as to produce order and efficiency.

DIVISION—(1) School Tactics; (2) School Government; and (3) School Work.

SCHOOL TACTICS—A uniform system of signals and movements for school work. The appearance and success of a school is largely dependent upon a well digested and faithfully executed plan of school tactics.

SIGNALS—The signals used should be few, simple and quiet. A low count or tap of pencil is best.

MOVEMENTS—These should be necessary and executed promptly and quietly by pupils. Sufficient time should be allowed between signals to admit of their prompt execution.

SCHOOL GOVERNMENT—Control exercised by a teacher over his school. This should always tend toward self-government. The order sought in school government should be that of activity and work. The most difficult part of a teacher's work is the control or management of his school, and calls for experience, judgment and wisdom.

DIVISION—(1) Objects and (2) Means.

OBJECTS—(1) To preserve order, (2) to facilitate instruction and (3) to form correct habits.

TO PRESERVE ORDER—"Order is Heaven's first law." "The fitness of condition and results from good government."

TO FACILITATE INSTRUCTION—Good school government lessens the labor of instruction and makes successful school work possible.

TO FORM CORRECT HABITS—The school is to train the pupil for life and not for school. Good character and correct habits are of more importance than good scholarship.

CONDITIONS OF GOOD CONTROL—

1. Physical: The first condition of good control is proper physical environment. Impure air, imperfect lighting, uncomfortable seats and wrong temperature, singly or together, have ruined many a recitation and many a day.

2. Wise seating of pupils: During the first days of school study the pupils carefully. As soon as you know them well change the seats of all the pupils (no one then justly can complain) placing th restless ones far from temptation.

3. Definite assignment of seat work: Each pupil should have a definite task for each study period.

4. Vigilance on part of teacher: The teacher must be able to conduct a recitation and at the same time supervise the room. She must be able to see the beginning of mischief, to anticipate trouble.

PUNISHMENTS—

1. Aim: (1) To reform the offender, (2) to warn others.

2. Kinds: (1) Taking away of privileges. If a child will not play peaceably with children let him have his playtimes alone. Let this illustration explain the principle. (2) Reprimands, reproofs, etc. Avoid sarcasm. Be just and kind. (3) Corporal.

3. Things to remember:

Do not punish in anger.

Do not punish for revenge.

Do not aim to humiliate pupils.

Do not whip a child before the school. The pupils will sympathize with the child.

Do not deprive a child of opportunity of out door exercise.

Rarely keep pupils after school.

Do not pull ears or hair.

Do not strike a child about the head.

Do not form the habit of scolding.

Let all punishment be done in kindness.

QUESTIONING—

1. Importance: The art of teaching has been defined as the art of questioning. Every teacher s ould make a study of the art of questioning.

2. Purpose. (1) To test retention of pupils. (2) To fix knowledge. (3) To impart new knowledge. (4) To arouse interest. (5) To stimulate investigation.

3. Character of questions: (1) Should be definite and clear, no catch questions. (2) Should be logical and progressive. Should gradually unfold the subject under discussion. (3) Should be framed in good English. (4) Should have variety.

Avoid stereotyped forms. (5) Should compel the pupils to use their mental powers. Avoid questions answerable by yes or no. (6) Answers should be definite, direct, and framed in good, concise English.

It is a fine practice for young teachers to make out before hand the leading questions to be asked. It avoids aimless and haphazard questions and is a saver of time.

GEOGRAPHY.

NOTE.—This subject begins with an outline for the study of North America. All the grand divisions can be taken up in same manner.

OUTLINE STUDY OF NORTH AMERICA.

I. LOCATION—
   1. Hemisphere.
   2. Oceans surrounding.
   3. Latitude and longitude.

II. EXTENTS—
   1. General shape.
   2. Length and breadth. *a*. Degrees; *b*. Miles.
   3. Area.—Compare with area of the state, or with other known units.

III. COAST-LINE—
   1. General description.
   2. Determined by—*a*. Highlands; *b*. Frozen soil; *c*. Action of water in wearing or building.
   3. Fiords; larger indentations; peninsulas; islands —how formed?
   4. Coasts of Atlantic and Pacific oceans compared.
   5. Length of coast-line—compared with length of continents.

IV. GENERAL RELIEF OF SURFACE—
   1. Two slopes. (The continent is divided into two general slopes by Continental Axis, or the water-parting which separates the drainage of Arctic and Atlantic oceans from that of the Pacific.) *a*. Long slope (Atlantic). (1) Extent. (2) General relief; plains; highlands of Labrador; Appalachian mountain system. (3) Drainage.
   (*a*) Divided by—1. Secondary Axis; 2. Height of Land.
   (*b*) Great river basins and river systems: 1. Mackenzie; 2. Hudson Bay; 3. St. Lawrence; 4. Mississippi.

(*c*) Atlantic and Gulf system of smaller river basins. (Special and comparative study of river basins should be made.)

b. Short slope (Pacific). (1) Extent. (2) General relief; plateau; Rocky mountains; Pacific ranges; lowlands. (3) Drainage.

(*a*) Great river basins and river systems: 1. Yukon; 2. Fraser; 3. Columbia; 4. Colorado.

(*b*) Systems of smaller river basins draining Pacific ranges.

(*c*) Systems of inland drainage. (4) Compare with extent, relief, drainage of long slope.

2. Highlands and lowlands. *a*. Western Highland; *b*. Appalachian mountain system; *c*. Highlands of Labrador; *d*. Central plains; *e*. Atlantic plains; *f*. Pacific lowlands.

Points for the study of the above: Location and extent of each; general topography; general slopes and drainage; height above sea-level; formation or structure; glaciers.

Suggestions: Compare the highlands as to direction, extent, general relief, structure of mountains, height and drainage. Let a study of altitude include highest and lowest portions of the plains, plateaus and mountain ranges or systems; also the highest peaks and the average heights of plateaus and mountains, with the general direction of the increase and decrease in elevation.

Compare the altitudes of different ranges, peaks, and sections of plateau in the same highland region; classify according to height.

Compare the highest and average altitudes of the great Western Highland with those of the Appalachian.

Pictures, cross-sections of continents, relief maps and sand modeling should accompany the study of surface.

A comparative study of heights will intensify ones image of the topography of North America and form a basis for comparison and study of the other continents.

V. Climate; Cause—

1. Distribution of wind.

a. Prevailing winds.

b. Periodical winds.

c. Variable winds.

d. Relation to latitude.

e. Influence of topography.

(1) Effect upon direction of wind.

a. Rocky mountains.

b. Pacific ranges.

c. Highlands of Mexico and Central America.

d. Appalachian mountains.

e. The great plains.

f. Influenced by the relations of sea and land.

g. Relation to ocean currents.

h. Relation to seasons of the years. (1) Prevailing directions of wind in summer; (2) Prevailing directions of wind in winter; (3) Direction of wind in spring and fall; (4) Different regions compared as to direction of wind in the same seas and same latitude: (*a*) Atlantic and Pacific coasts; (*b*) Coasts with interior of continent. (5) Direction of wind in the same region at different seasons of the year.

2. Distribution of temperature.

a. Relation to (1) latitude. (2) wind, (3) topography, altitude, (4) the relations of sea and land, (5) ocean currents, (6) the seasons.

b. As shown by isothermal lines: (1) in winter; (2) in summer; (3) Annual average; (4) Equal annual range of temperature; (5) Places of equal temperature in the same season; (6) Comparison of temperatures in the same latitude at the same season; (7) Temperatures of the same places at different seasons of the year; (8) Places having the same annual average; (9) Areas of greatest extremes in temperature; (10) Temperature of the highlands compared with that of lowlands in the same latitude; (11) Temperature of Atlantic and Pacific coasts compared; (12) Temperature of coast compared with that of interior of the continent.

3. Distribution of rainfall:

a. Cause; relation to (1) the wind, (2) temperature, (3) topography, (4) the relations of sea and land, (5) ocean currents, (6) latitude, (7) the seasons.

b. Average rainfall of different regions compared. (1) Places having the same average rainfall; (2) Places of equal temperature with difference in precipitation; (3) Regions in the same latitude compared at the same season of the year; different latitudes; different seasons; (4) Different regions with the same direction of prevailing winds; (5) Regions with different directions of prevailing winds; (6) Precipitation of highlands and lowlands compared; (7) East and west sides of the Pacific and Rocky Mountain ranges; east and west coast lands of Mexico; (8) Rainfall of the Atlantic and Pacific coasts of North America; (9) Rainfall of coast compared with that of the interior; (10) Rainfall of the Great Basin with that of the Mississippi river basin; (11) Precipitation of the Arctic regions with that of regions around the Gulf of Mexico; (12) Areas of extremes: (*a*) Greatest yearly rainfall; (*b*) Smallest yearly rainfall; (*c*) Semi-periodical rainfall; (*d*) Heavy rainfall with periods of drouth.

c. Comparison of rainfall in the same region at different seasons of the year.

NOTE.—Study of climate should be made in connection with good physical, or relief maps, also maps showing temperature, direction of wind, rainfall, etc.

VI. Soil—

1. Relation to

a. Climate.

b. Topography.

c. River action.

d. Action of the sea.

e. Action of wind.

f. Glacial action.

g. Volcanic action.

2. Distribution of soil; where found.
   a. Very fertile.
   b. Less fertile.
   c. Poor; stony.

VII. Distribution of vegetation—

Indiginious; cultivated.

1. Influenced by temperature.
   a. In different zones; plants peculiar to (1) tropics, (2) sub-tropics, (3) temperate zone, (4) frigid zone.
   b. At different altitudes.
2. Influenced by rainfall.
   a. Regions of equal temperature. (1) Heavy rainfall; marshy lands; (2) Less rainfall; (3) Arid.
3. Relation to soil.
   a. Very fertile.
   b. Less fertile.
   c. Poor.
4. Relation to topography.
   a. Lowlands.
   b. Plateau.
   c. Mountain.
   d. Valley.
5. Distribution of forests; grassy plains.
6. Relation to length of seasons.
7. Characteristic vegetation of different latitudes compared.
8. Comparison of vegetation of different regions in the same latitude.
   a. Appalachian and Rocky Mountains.
   b. Atlantic and Pacific coast lands.
   c. The Great Basin with Mississippi river basin.
   d. Right and left slopes of the Mississippi basin.
   e. East and west coast lands and plateau of Mexico.
9. Comparison of vegetation in regions of equal temperature and different average rainfall.
10. Regions of equal rainfall and different temperatures.
11. Distribution of vegetation in relation to use.

VIII. Distribution of Animal Life—

1. Influenced by temperature.

a. In zones; animals peculiar to—(1) torrid zone, (2) sub-tropics, (3) temperate zone, (4) frigid zone.

b. At different altitudes.

2. Influenced by moisture; animal life peculiar to
a. Regions of heavy rainfall.
b. Regions of average rainfall.
c. Regions of dry climate.
d. Marshy lands.
e. Rivers; lakes; seas.

3. Relation to topography; animal life peculiar to
a. Plains.
b. Mountains.
c. Soil in lowlands.
d. Soil in highlands.

d. Influenced by vegetation; animal life peculiar to (1) forests, or woody countries, (2) open country, or grassy plains, (3) regions of little vegetation.

e. Distribution in relation to habits.

f. Distribution in relation to use.

g. Characteristic fauna of different regions compared.

IX. Distribution of Minerals and Metals—

1. In relation to topography.

a. Different regions compared as to distribution of minerals and metals, (1) highlands and lowlands, (2) western highlands with the Appalachian, (3) different parts of the same system of highlands.

2. Distribution in relation to use.

X. Population—

1. Distribution of people.

a. Influenced by climate: (1) In different zones of heat, (2) at different altitudes, (3) in regions of abundant rainfall, (4) regions of little rainfall, (5) its effects upon health.

b. Relation to topography: (1) lowlands, (2) plateaus, (3) mountains, (4) valleys.

c. Relation to nature of soil: (1) very fertile, (2) less fertile, (3) poor.

d. Influenced by distance from river, lake or sea; facilities for navigation.

e. Relation to life: (1) vegetables, (2) animal.

f. Relation to distribution of minerals and metals.

2. Distribution of races of men.

a. American Indians.

b. American Tuetons.

c. Mexicans.

d. Negroes.

e. Esquimos.

f. Relation of distribution of races to (1) climate, (2) topography, (3) soil, (4) distance from water, (5) vegetation, (6) animal life, (7) distribution of minerals and metals.

3. Industries.

a. Agriculture.

b. Grazing.

c. Fishing.

d. Lumbering.

e. Mining.

f. Manufacturing.

g. Commerce.

h. Relation of industries to (1) topography, (2) climate, (3) soil, (4) streams, lakes, bays, oceans, (5) vegetation, (6) animal life, (7) minerals and metals, (8) exports, imports, (9) railroads.

i Relation of distribution of population to industries.

j. Different physical regions compared as to (1) kinds of occupation; leading industries; (2) number of people engaged in each; (3) products of each; their commercial value; (4) exports; imports; the necessity for each; relation to physical condition of the region; relation to population; relation to means of transportation.

k. The Western Highlands compared with the Appalachian; highlands with lowlands in the same latitude and with the great central plains; the Atlantic slope with the Pacific.

l. North and south temperate regions compared; temperate with the frigid; temperate with the torrid regions.

m. Regions having the best natural conditions for the occupation; work and development of man; regions with poorest conditions.

4. Cities.

a. Seaports; harbors.

b. Internal commercial cities.

c. Manufacturing cities.

d. Mining cities.

e. Political cities.

f. Educational centres.

g. Health resorts.

h. Relation of location and growth to (1) topography, climate, soil; (2) means of transportation; (3) distribution of vegetation, animal life, minerals and metals; (4) distribution of population; (5) industries; products; (6) exports and imports; (7) points of interuption in transportation; meeting-places of trade routes.

i. Comparison of cities. (1) As to (*a*) advantages of location; (*b*) means of transportation; (*c*) population; (*d*) industries, b usiness; (*e*) products, exports and imports; (*f*) growth and prosperity; causes which promote, or hinder. (2) Cities in different physical regions: (*a*) Mountains and valleys; (*b*) Highlands and lowlands; (*c*) Sea coast and interior. (3) Cities of north and south temperate regions; temperate and torrid regions.

DEFINITIONS—Geography—Mathematical, political, physical; Orology; Meterology; Hydrology; Ethnology; Planets; Satellites; Earth—Proofs of rotundity of the earth; Distance from sun, sphere or globe, diameter, circumference, earthquake, trend, lava, crater, axis; Poles—North, south; Revolutions—Annual, diurnal; Circles—Great, small; Degree, equator, parallels; Lattitude—

North, south, 90 degrees; Tropics—Cancer, Capricorn; Polar Circles—Arctic, Antarctic; Meridian circles, meridian; Longitude—East, west, 180 degrees Isothermal lines; Horizon; Equinoxes; Solstices; Ecliptic; Hemispheres—East, west, north, south; Zones—North and South Temperate, each 43 degrees; Torrid, 47 degrees; North and South Frigid, each 23½ degrees; Earth's surface—Land and water.

Natural Divisions of Land—Continent; Islands—Continental, oceanic; Atoll; Peninsula, isthmus, cape, promontory, mountain, hill; Volcanoes—Active, extinct; Range or chain, peak or summit; Valleys—Longitudinal, transverse; Base, slopes, crest, pass or passage, mountain-knot, plain, prairies or savannas, llanos or pampas, selvas, steppes, table-land or plateau, desert, oasis, swamp, water shed, delta, river basin; Reefs—Fringing, barrier, encircling.

Natural Divisions of Water—Ocean, sea, gulf or bay, fiord, harbor, haven or port, road or roadstead, strait, channel, sound; Lakes—Salt, fresh; Pond, archipelago, river, estuary, river system, icebergs, glacier, rapids, canon, falls, lagoon; Springs—Cold, thermal, artesian wells, firth, canal.

Tides—Flood, ebb, spring, neap.

Currents—Temporary, periodical, constant.

Map.

Climate, Depends Upon—Latitude, elevation, prevailing winds, ocean currents, distance from sea.

Quadrant.

Topics for Geographical Study—Boundaries, latitude, longitude, surface, mountains, plains, islands, capes, bodies of water, rivers, climate, soil, natural curiosities, productions, exports, imports, square miles, population, race, state of society, capital, chief towns, internal improvements, education, religion, government, manners, customs, language, history, science, literature, art.

NORTH AMERICA.

COUNTRIES AND FORM OF GOVERNMENT—Danish America, colony; Dominion of Canada, colony; United States of America, republic; Mexico, republic; Central America, five republics, one colony.

MOUNTAINS—Rocky, Hecla (volcano,) St. Elias (volcano,) Fairweather (volcano,) Cascade, Coast Range, Sierre Madre, Sierre Nevada, Popocatapetl (volcano,) Mt. Hood, Appalachian, Fremont's Peak, Mt. Washington, Long's Peak, Pike's Peak.

RIVERS—Yukon, Mackenzie, Snake Savannah, Slave, Saguenay, Ohio, Ottawa, Athabasca, Churchill, Nelson, Severn, Saskatchawan, Columbia, Colorado, Gila, Missouri, Hudson, James, Mississippi, Arkansas, St. Lawrence, Rio Grande.

GULFS AND BAYS—Baffin, Hudson, James. St. Lawrence, California, Honduras, Campeachy, Mexico, Chesapeake, Delaware.

STRAITS—Belle Isle, Northumberland, Juan de Fuca, Vancouver, Davis, Hudson, Florida, Youcatan.

ISLANDS—Arctic archipelago, Disco, Kodiac, Sitka, Queen Charlotte, Vancouver, West Indies, Bahama, Bermuda, Cape Breton, Newfoundland, Greenland, Iceland.

CAPES—Farewell, Bathurst, Chudleigh, Barrow, Flattery, Mendocino, St Lucas, Corrientes, Sable, Hatteras, Sandy Hook, Cod, Race.

CITIES—Reykjavik, Upernavik, Ottawa, Montreal, Quebec, Sitka, Chicago, New York, Boston, Halifax, Philadelphia, Baltimore, Washington, Cincinnati, St. Louis, Vera Cruz, Mexico, San Francisco.

WEST INDIES.

GREATER ANTILLES—Cuba, Hayti, Porto Rico, Jamacia, Isle of Pines.

LESSER ANTILLES—Virin, St. Thomas, St. Croix, Guadelupe, Dominica, Martinique, Barbadoes, St. Vincint, Grenada, Tobago, Trinidad.

STRAITS—Windward Passage, Mono Passage.

CITIES—Havana, Mantanzas, Cardenas, Puerto Principe, Santiago de Cuba, Kingston, Puerto Plata, San Domingo, San Juan.

SOUTH AMERICA.

COUNTRIES AND FORM OF GOVERNMENT—United States of Brazil, republic; Argentina, republic; Bolivia, republic; Ecuador, republic; Chile, republic; Venezuela, republic, Peru, republic, Uruguay, Paraguay, republic; Guiana, British, French, Dutch, colonies.

MOUNTAINS—Andes, Parima, Pacaraima, Acaria, Geral, Brazilian Andes, Aconcagua (volcano,) Cotopaxi (volcano,) Pichincha (volcano,) Mt. Chimborazo.

RIVERS—Amazon, Orinoco, Negro, Plata, Uruguay, Parana, St. Francisco, Paragua, Magdalena.

GULFS AND BAYS—Darien, Panama, St. George, Venezuela, St. Mathias, Choco.

ISLANDS—Tierra del Fuego, Joannes or Marajo, Chiloe, Falkland, Wellington, Lobos, Trinidad.

CAPES—Gallinas, St. Roque, Blanco, Horn, Frio, Corrientes, St. Antonio, Aguja.

CITIES—Rio Janerio, Bahia, Lima, Bogota, Sucre, LaPaz, Quito, Buenos Ayres, Santiago.

EUROPE.

COUNTRIES AND FORM OF GOVERNMENT—Russia, empire; Turkey, empire; Austria, empire; Germany, empire; Spain, kingdom; Portugal, kingdom; Great Britain, kingdom; Italy, kingdom; Holland, kingdom; Belgium, kingdom; Denmark, kingdom; Sweeden and Norway, kingdom; Greece, kingdom; Servia, kingdom; Roumania, kingdom; Montenegro, principality; Bulgaria, principality; France, republic; Switzerland, republic.

MOUNTAINS—Alps, Pyrenees, Apennine, Carpathian, Balkan, Caucasus, Ural, Auvergne, Cevennes, Dovrefield, Kiolen, Sierra Nevada, Cantabrian, Sierra Morena, Sierra Estrella, Mt. Blanc, Pindus.

RIVERS—Ural, Volga, Don, Ebro, Pruth, Dnieper, Dniester, Drave, Dwina, Duna, Onega, Douro, Vistula, Danube, Oder, Guadiana, Elbe, Rhine, Rhone, Seine, Loire, Po, Tagus, Weser, Save.

Seas, Gulfs and Bays—White, Baltic, North, Irish, Adriatic, Azof, Mediterranean, Marmora, Black, Caspian, Bothnia, Finland, Riga, Biscay, Lyons, Genoa, Taranto, Dantzic.

Straits—Gibraltar, Otranto, Dover, Dardanelles, Bosphorus, Yenikale, Cattegat, Skager-Rack, English Channel, St. George's Channel.

Islands—Lofoden, Faroe, Shetland, Orkney, British, Balearic, Corsica, Sardinia, Sicily, Malta, Ionian, Candia, Cyprus.

Capes—North, Clear, Land's End, St. Matthew, Finisterre, St. Vincent, Ortegal, Matapan.

Cities—St. Petersburg, Archangel, Odessa, Astrakan, Moscow, Hammerfest, Berlin, Christiana, Stockholm, The Hague, Brussels, Paris, Vienna, Berne, Rome, Naples, Madrid, Lisbon, Athens, Constantinople, Cettigne, Bucharest.

ASIA.

Countries and Form of Government—Siberia; colony; China, empire; Japan, empire; Turkey, empire; Burmah, kingdom; Siam, kingdom; Anam, kingdom; Arabia, despotism; Persia, empire; British India, colony; Eastern Turkestan, colony; Afghanisstan, despotism; Baluchistan, despotism.

Mountains—Himalaya, Yablonoi, Altai, Khin Gan, Nanling, Hindoo Koosh, Kara-Korum, Western Ghauts, Eastern Ghauts, Elburz, Taurus, Mt. Sinai, Mt. Ararat, Mt. Everest, Thian-Shan, Fujiyama (volcano,) Vindhya, Kuenlun, Stanovoy.

Rivers—Lena, Yenisei, Obi, Irtish, Angara, Sihon, Amoo, Hoang-Ho, Yang-tse-Kiang, Brahmapootra, Cambodia, Ganges, Indus, Tigris, Euphrates, Amoor.

Seas, Gulfs and Bays—Kara, Arabian, China, Blue, Yellow, Japan, Okhotsk, Behring, Red, Aral, Obi, Persian, Aden, Bengal, Siam, Tonquin, Anadir, Pechelee.

Straits—Behring, Channel of Tartary, Corea, Formosa, Malacca, Ormus, Babel Mandeb, Palk, Hainan.

ISLANDS—Nova Zembla, New Siberia, Kurile, Saghalien, Yezo, Hondo, Shikoku, Kiushiu, Formosa, Japan, Hainan, Ceylon, Cyprus, Laccadive, Maldive, Bahrein, Nicobar, Andaman, Socotra.

CAPES—Northeast, East, Lopatka, Cambodia, Romania, Comorin.

CITIES—Pekin, Lassa, Seoul, Kasghar, Hue, Bankok, Mandalay, Calcutta, Colombo, Cabul, Teheran, Riad, Muscat, Tobolsk, Omsk, Tomsk, Tiuman, Barnaul, Irkoutsk, Khiva, Bokhara, Smyrna, Damascus, Jerusalem.

AFRICA.

COUNTRIES—Barbara States—Morocco, Algeria, Tunis, Tripoli; Fezzan, Egypt, Nubia, Soudan, Abyssinia, Zanguebar, Upper Guinea, Sierra Leone, Lower Guinea, Barca, Mozambique, Cape Colony, Natal, Transvaal, Orange Free States, South African Republic, Senegambia, Liberia, Sahara.

MOUNTAINS—Atlas, Kong, Crystal, Snow, Great Karroo, Kondi, Mt. Kenia, Mt. Killamandjaro, Cameroon.

RIVERS—Nile, White Nile, Blue Nile, Atbara, Zambesi, Orange, Congo, Niger.

GULFS AND BAYS—Sidra, Cabes, Guinea, False, Algoa, Delagoa.

ISLANDS—St. Helena, Canary, Princes, St. Thomas, Madagascar, Comoro, Zanzibar, Socotra.

CAPES—Bon, Spartel, Blanco, Verde, Palmas, Lopez, Negro, Frio, Good Hope, Agulhas, Correntes, Delgado, Amber, Guardafui, St. Mary.

CITIES—Cairo, Alexandria, Damietta, Port Said, Suez, Gondar, Antalo, Ankobar, Zanzibar, Tananarivo, Bloemfontein, Cape Town, Pietermaritzburg, Pretoria, Monrovia, Fez, Free Town, Morocco, Algiers, Constantine, Oran, Tunis, Tripoli, Mourzouk, Bengazi, Timbuctoo, Kano, Sokoto, Kuka.

OCEANICA.

DIVISIONS—Malaysia, Australasia, Polynesia.

MOUNTAINS—Blue, Darling, Australian Alps, South Alps, Ashburton, Egmont (volcano,) Edgecombe (volcano,) Mt. Ophir, Mt. Kosciusko, Hawaii (volcano.)

RIVERS—Murray, Darling, Victoria, Lachlan, Ashburton, Cooper.

SEAS, GULFS AND BAYS—Botany, Coral, Carpentaria, Spencer, Java, Celebes, Cambridge, Arafura.

STRAITS—Bass; Cook, Sunda, Torres, Molucca, Macassar.

ISLANDS—Australia, New Guinea, Sumatra, Borneo, Java, Celebes, Molucca, Philippine, Singapore, Sandwich, New Zealand, Friendly, Society, Feejee, Tasmania, Solomon, Banca.

CAPES—York, Sandy, Howe, Wilson, Leeuwin, Northwest, Datu, Farewell, West, East, Maria.

CITIES—Acheen, Bencoolen, Batavia, Manila, Victoria, Wellington, Sydney, Hobart, Adelaide.

RACES AND RELIGIONS.

RACES—Caucasian, 600,000,000; Mongolian, 600,000,000; African, 250,000,000; Malay, 4,000,000; American, 8,000,000. Estimated to speak over 3,000 different languages.

RELIGIONS—Pagans, 676,000,000; Christians, 320,000,000; Mohammedans, 200,000,000; Jews, 14,000,000. Profess about 1,000 different forms of religion.

Population of Some of the Principal Cities of the World.

London, 4,433,018; Paris, 2,536,834; Pekin, 1,000,000; Canton, 2,000,000; New York, 3,500,000; Berlin, 1,677,304; Vienna, 1,364,548; Philadelphia, 1,046,964; Tokio, 1,268,930; St. Petersburg, 1,267,023.

Ten Principal Cities of the United States.

New York, 3,500,000; Philadelphia, 1,046,964; Chicago, 1,619,226; Boston, 496,920; St. Louis, 451,770; Baltimore, 434,439; Cincinnati, 296,908; San Francisco, 298,997; New Orleans, 242,039.

Seven Wonders of the World.

The pyramids, temples and hanging gardens of Babylon; Statute of Jupiter Olympus; Temple of Diana at Ephesus; Mausoleum of Halicarnassus; The Pharos; The Colossus of Rhodes.

Comparative Table of Islands.

In the following table Michigan, with an area of 56,500 square miles, is taken as a unit.

NAME.	Areas in Square Miles.	Comparative Size.
Australia	3,000,000	53.09
Borneo	300,000	5.30
New Guiena	275,000	4.09
Madagascar	200,000	3 53
Sumatra	130,000	2.47
New Zealand	106,000	1.87
Great Britain	84,000	1 50
Celebes	70,000	1.23
Jaba	51,500	.91
Cuba	46,000	.81
Newfoundland	40,200	.71
Iceland	35,000	.61
Ireland	32,500	.57
Hayti	28,000	.49
Tasmania	26,200	.46
Ceylon	24,500	.43
New Caledonia	6,500	.11
Jamaica	6,000	.10
Timor	5,000	.08
Bahamas	4,800	.08

ARITHMETIC.

The course in Arithmetic should prepare for the business world.

(2) It should discipline a person to think accurately and consecutively.

A number is the "How Many" of a collection of objects (1).

(2) A number is ratio, the result of measurement.

A unit is a measure of a quantity, as an inch, a foot, a dollar, etc.

Numbers are necessarily abstract, but we speak of concrete numbers.

Numbers are integral and fractional.

SCALE OF NOTATION.—Our scale is the decimal system. It was invented by the Hindoos.

Any number—Integer—$d. + \frac{}{10}^{1}d_2 + \frac{}{10}^{2}d_3 + \frac{}{10}^{3}d_4 + \ldots . \frac{}{10}^{n1}d_n$

Illustrate our notation by splints, bundles of 10, bundles of 100, etc.

Secure accuracy and facility in writing and reading numbers.

THE METRIC SYSTEM extends the scale of ten throughout. It was invented by the French. *When?* It has been adopted in part by nearly all the civilized world. It should come into common use in United States.

ROMAN NOTATION:—Letters, values, principles, uses.

ADDITION:—Uniting like numbers; Aim to secure accuracy and facility in this import part of business education. Let pupils add *five* minutes each day for a term. *Checks*—Casting out the nines.

Sign, equality.

SUBTRACTION.

Treat subtraction as the inverse of addition. This is the business way of making change. What added to 4 makes 9? Bought 81 cents worth and handed merchant 1.00; the merchant counts out what added to 81 cents makes 100 cents. Use this method from the first introduction to subtraction and continue its use.

$\begin{matrix}456\\232\\224\end{matrix}$; $\begin{matrix}456\\187\\269\end{matrix}$. It is the most rapid method known when once we are accustomed to it.

TERMS: Minuend, subtrahend, remainder or difference, Sign, checks, casting out the nines.

MULTIPLICATION.

Multiplication has its origin in addition, as, 2+2+2= 3 twos.

The important work in multiplication is to have the pupils make the multiplication tables and learn them by use. Let pupils have sufficient time here; vary the work so as not to be too monotonous.

TERMS:—Multiplican, multipler, product, factors, sign. Product of the same kind as the multiplican, multiplier *always* abstract.

CHECKS—Casting out the nines.

SHORT METHODS—10, 100, $12\frac{1}{2}$, $16\frac{2}{3}$, $33\frac{1}{3}$, 99, etc. $\frac{-2}{15}$, $\frac{-2}{25}$, $\frac{-2}{35}$, $\frac{-2}{95}$; 18×12; 17×13; 32×38; 81×89, etc.

DIVISION.—Treat division as the inverse of multiplication: $4\times3=12$; $12\div4=3$; $12\div3=4$. Pupils know division tables, if they know the multiplication table. Give much time to division. Carefully grade the work. Do not use too large numbers.

Pupils need aid in determining the quotent figure.

Make out a table thus:

$17\times1=17$; $17\times3=51$; $17\times5=85$; $17\times7=116$; $17\times9=153$; $17\times2=34$; $17\times4=68$; $17\times6=102$; $17\times8=136$.

Pupils will soon learn by using this to tell at once the quotient figure.

TERMS—Dividend, divisor, quotient, remainder.

SIGN—Dividend and divisor like numbers—Quotient abstract; remainder of the same kind as the dividend.

PRINCIPLES—Develop with care.

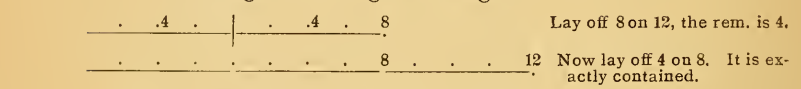
CHECKS—Casting out nines.

SHORT METHODS—12½, 16⅔, 33⅓, 25, 50, 62½, 87½, 125, 333⅓, etc. *Practice much.*

PROPERTIES OF NUMBERS—Numbers divisible by 2, 4, 8; 3, 6. 9; 5 and 10, 7 and 11. Why? *Def.* Integer, exact divisor, common divisor, greatest common divisor, prime number, composite number, even number, odd number, factors, multiple, common multiple, least common multiple.

CANCELLATION—Use much.

G. C. D.—Methods, (1) Inspection, (2) Factoring, (3) Continued Division. Illustrate last method by using lines of given length:



Bring out why you do every step. Take many examples; use small numbers. After this take larger numbers. Pupils will see the reason for the steps taken.

L. C. MULTIPLE.—Inspection. (2) Factoring; (3) Finding G. C. D., then dividing one of the numbers by this and multiply the quotient by the other number. *Illustration*, 14 and 21. *Inspection*, 42.

FACTORING—$14=7\times2$; $21=3\times7$; L. C. M. $=2\times3\times7=42$.

METHOD—(3) G. C. D. of 14 and $21=7$; $14\div7=2$; $21\times2=42$. Give much drill on the inssection method for it is the useful one.

CANCELLATION.—Cancel whenever possible. Give many examples for cancellation purposes.

FRACTIONS.

1. Develop the fractional concept. *Methods* (1) Paper folding. (2) Line.

Halves.

Cut out paper circles and distribute them to each member of the class. Let each pupil fold his circle into halves.

$$1=\tfrac{2}{2};\quad \tfrac{1}{2}+\tfrac{1}{2}=1;\quad 1-\tfrac{1}{2}=\tfrac{1}{2};\quad 1-\tfrac{1}{2}-\tfrac{1}{2}=0$$

Fourths.

Let pupils fold circles into fourths.

$1=\frac{4}{4}$; $\frac{1}{2}=\frac{2}{4}$; $\frac{1}{2}+\frac{1}{4}=\frac{2}{4}+\frac{1}{4}=\frac{3}{4}$; $\frac{1}{2}-\frac{1}{4}=\frac{2}{4}-\frac{1}{4}=\frac{1}{4}$;

$\frac{1}{2}$ of $\frac{1}{2}=\frac{1}{4}$; $\frac{1}{4}\div\frac{1}{4}=1$; $\frac{1}{2}\div\frac{1}{4}=\frac{2}{4}\div\frac{1}{4}=2$, etc.

Eighths.

Let pupils fold circles into eights.

$1=\frac{8}{8}$; $\frac{1}{4}=\frac{2}{8}$; $\frac{1}{2}=\frac{4}{8}$; $\frac{3}{4}=\frac{6}{8}$; $\frac{1}{2}+\frac{1}{4}=\frac{2}{4}+\frac{1}{4}=\frac{3}{4}$;

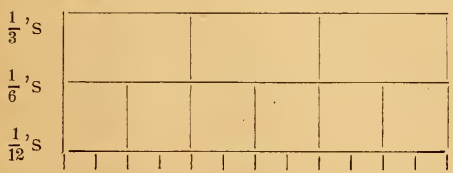
$\frac{3}{8}-\frac{1}{4}=\frac{3}{8}-\frac{2}{8}=\frac{1}{8}$; $\frac{1}{2}$ of $\frac{1}{4}=\frac{1}{8}$; $\frac{1}{2}$ of $\frac{3}{4}=\frac{1}{2}$ of $\frac{6}{8}=\frac{3}{8}$

$\frac{1}{2}\div\frac{1}{4}=\frac{2}{4}\div\frac{1}{4}=2$; $\frac{1}{2}\div\frac{1}{8}=\frac{4}{8}\div\frac{1}{8}=4$, etc.

Do not use symbols until pupils see the truth in the concrete. Centre their thoughts upon the circles. Go slowly in laying these foundations. This method can be used the first time fractions are presented.

Line Method.

To develop thirds, sixths and twelfths: Draw a line 12 units long. Divide it into thirds. Divide each third into two equal parts. Now divide each sixth into two equal parts. Develop the relations between $\frac{1}{3}$'s, $\frac{1}{6}$'s, $\frac{1}{12}$'s.



$1=\frac{3}{3}=\frac{6}{6}=\frac{12}{12}$; $\frac{1}{3}=\frac{2}{6}=\frac{}{12}$; $\frac{}{6}=\frac{2}{12}$.

$\frac{2}{3}=\frac{4}{6}=\frac{8}{12}$; $\frac{1}{6}=\frac{1}{2}$ of $\frac{1}{3}$; $\frac{1}{12}=\frac{1}{2}$ of $\frac{1}{6}$.

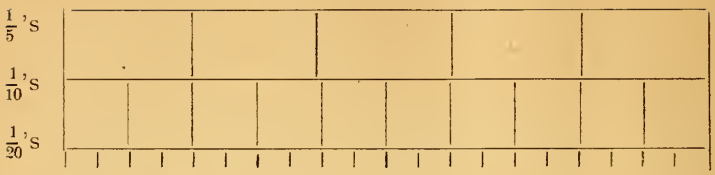
$\frac{1}{4}$ of $\frac{1}{3}=\frac{1}{12}$; $\frac{1}{3}\div\frac{1}{12}=\frac{4}{12}\div\frac{1}{12}=4$, etc.

In a similar way develop thirds and ninths.

$\frac{1}{3}=\frac{3}{9}$; $\frac{2}{3}=\frac{6}{9}$; $\frac{3}{3}=\frac{9}{9}$; $\frac{1}{3}$ of $\frac{1}{3}=\frac{1}{9}$; $\frac{1}{3}$ of $\frac{2}{3}=\frac{2}{9}$.

$\frac{1}{3}+\frac{1}{9}=\frac{3}{9}+\frac{1}{9}=\frac{4}{9}$; $\frac{4}{9}-\frac{1}{3}=\frac{4}{9}-\frac{3}{9}=\frac{1}{9}$.

Fifths, Tenths, Twentieths.



$1=\frac{5}{5}=\frac{10}{10}=\frac{20}{20}$; $\frac{1}{5}=\frac{2}{10}=\frac{4}{20}$; $\frac{2}{5}=\frac{4}{10}=\frac{8}{20}$.

$\frac{1}{5}+\frac{1}{10}+\frac{1}{20}=\frac{4}{20}+\frac{2}{20}+\frac{1}{20}=\frac{7}{20}$; $\frac{2}{5}+\frac{2}{10}=\frac{4}{10}+\frac{2}{10}=\frac{6}{10}=\frac{3}{5}$.

$\frac{1}{2}$ of $\frac{1}{5}=\frac{1}{10}$; $\frac{1}{2}$ of $\frac{1}{10}=\frac{1}{20}$; $\frac{1}{4}$ of $\frac{1}{5}=\frac{1}{20}$; etc.

Likewise develop the relations between $\frac{1}{5}$'s and $\frac{1}{15}$'s.

Likewise develop the relations between $\frac{1}{7}$'s and $\frac{1}{14}$'s.

LINE METHOD.—With older pupils this is a standard method.

BRING OUT PRINCIPLES—To like denominators. To lowest terms. Mixed numbers to fractions. Complex fractions to simple ones.

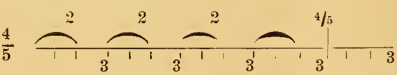
ADDITION—(1) Like denominators; (2) Unlike denominators; (3) Mixed numbers.

SUBTRACTION—(1) Like denominators; (2) Unlike denominators; (3) Mixed numbers.

MULTIPLICATION.—(1) Fraction by fraction. $\frac{2}{3}$ of $\frac{4}{5}=?$

$\frac{4}{5}=\frac{12}{15}$; $\frac{2}{3}$ of $\frac{12}{15}=\frac{8}{15}$; hence, $\frac{2}{3}$ of $\frac{4}{5}=\frac{8}{15}$; $\frac{3}{4}$ of $\frac{9}{10}=?$

LINE METHODS—

$\frac{2}{3}$ of $\frac{4}{5}$ 

$=\frac{2\times4}{3\times5}=\frac{8}{15}$.

Require every pupil to prove many of these by both methods. Bring out the law of fractions. (This case includes all others) *Why?* Do much work here. Lay a good foundation. Use cancellation freely.

DIVISION—METHOD. (1) Inverse of multiplication. (2) Reduce to common denominator.

ILLUSTRATION—

$\frac{2}{3}$ of $\frac{4}{5} = \frac{8}{15}$; $\frac{8}{15} \div \frac{2}{3} = \frac{4}{5}$; $\frac{8}{15} \div \frac{4}{5} = \frac{2}{3}$. Therefore, to divide one fraction by another, divide the numerator of the dividend by the numerator of the divisor, divide the denominator of the dividend by the denominator of the divisor.

EXAMPLE—

$\frac{7}{8} \div \frac{3}{4} = ?$ $\frac{7 \times 3}{8 \times 3} = \frac{21}{24}$; $\frac{21}{24} \div \frac{3}{4} = \frac{7}{6}$

(2) COMMON DENOMINATOR—

$\frac{7}{8} \div \frac{3}{4} = \frac{7}{8} \div \frac{6}{8} = \frac{7}{6}$

Both of these methods lead up to inverting divisor and then multiplying. Be sure to develop these fundamental truths. Every principle of fractions can be clearly brought out. Let pupils make up many examples: use fractions with small denominators.

Secure three things: (1) Neatness; (2) Accuracy; (3) Facility.

DECIMALS.

The pupils are already familiar with the decimal system of notations with reference to integers, now they are to study an extension of this system: They know that 10 units make one ten, 10 tens make one hundred, etc. This same law is to hold as we proceed to the right, as—

$\overset{c}{1}\ \overset{b}{1}\ \overset{a}{1}.\ \overset{a'}{1}\ \overset{b'}{1}\ \overset{c'}{1}.$ $\overset{a}{1} = \frac{1}{10}$ of b; $\overset{b}{1} = \frac{1}{10}$ of c; $\overset{a'}{1} = \frac{1}{10}$ of $\overset{a}{1}$; $\overset{b'}{1} = \frac{1}{10}$ of $\overset{a'}{1}$, etc.

Hence, we see the decimal law running through the entire series of digits. This is the teacher's idea of our notation.

TO DEVELOP THIS WITH PUPILS, use the metre. 1 represents the metre; .1 represents the decimetre; .01 represents = centimetre, etc.

METHOD (2). Take a cube 10 units on a side. METHOD (3). Use $1, 1 dime, 1 cent.

The decimal point is used to locate units.

LAWS.—(1) Moving the decimal point one place to the right multiplies the number by 10. (2) Moving the decimal point one place to the left, *divides* the number by 10. (3) Annexing a cypher to a decimal does not change its value. *Illustration:* 200. 20.0; 2.00; .200; .200; 2.00; 20.0; 200.

THIRD LAW.—.4=.40 for $\frac{4}{10}=\frac{40}{100}=\frac{4}{10}$.

Require pupils to be proficient in writing and reading decimals to millionths without numerating.

Addition and subtraction present no difficulties.

MULTIPLICATION—

Method (1). $200\times.1=20$; $200\times.01=2$. *Law (2)* $24\times.01=.24$, *Law (2)*. $24\times.03=24\times.01\times3=.72$, *Law 2.*

Method (2). $2.4\times.01=\frac{24}{10}\times\frac{1}{100}=\frac{24}{1000}=.024$. *Law of pointing off.* Develop these fundamentals with great care.

DIVISION—

Method (1). Remove the decimal point from the divisor, as, $.2).84=2)8.4\,|\,4.2$; $.02)8.4=2)840\,|\,420.$

PRINCIPLE—Multiplying dividend and divisor by the same numbers does not change the value of the quotient.

Method (2). $.84\div.2=\frac{\overset{42}{84}}{\underset{10}{100}}\times\frac{10}{2}=\frac{42}{10}=4.2.$

Develop pointing off quotient. Pupils should be so drilled that they are as proficient in the use of decimals as in the use of integers.

INTRODUCTION TO PERCENTAGE.

Percentage is simply an application of fractions and decimals. Pupils know how to find any fractional or decimal part of any number. Percent. is from the Latin percentum and means by the hundred. Hence we say 4% for .04; 5% for .05, etc. Give many examples to fully bring the change of names used.

REDUCTION OF FRACTIONS TO DECIMALS:—

$\frac{1}{2}=.50$; $\frac{1}{4}=.25$; $\frac{3}{4}=.75$; $\frac{1}{8}=.12\frac{1}{2}$; $\frac{3}{8}=.37\frac{1}{2}$;

$\frac{5}{8}=.62\frac{1}{2}$; $\frac{7}{8}=.87\frac{1}{2}$; $\frac{1}{3}=.33\frac{1}{3}$; $\frac{2}{3}=.66\frac{2}{3}$; $\frac{1}{6}=.16\frac{2}{3}$

$\frac{5}{6}=.83\frac{1}{3}$; $\frac{1}{12}=.08\frac{1}{3}$; $\frac{5}{12}=.41\frac{2}{3}$; $\frac{7}{12}=.58\frac{1}{3}$; $\frac{1}{5}=.20$;

$\frac{2}{5}=.40$; $\frac{3}{5}=.60$; $\frac{4}{5}=.80$; $\frac{1}{10}=.10$; $\frac{3}{10}=.30$;

$\frac{7}{10}=.70$; $\frac{9}{10}=.90$; $\frac{1}{20}=.05$; $\frac{3}{20}=.15$; $\frac{7}{20}=.35$; etc.

Let pupils *make* out this list, then drill by *using* all of the different ones. This should be thoroughly done.

Now we are ready for the problems of percentage.

Give many mental examples—Rapid work.

Treat the problems under *three* heads. (1) To find any percent. of any number. (2) To find what percent. one number is of another. (3) To find a number, given any percent. of it.

$$(1)\ \frac{200}{.06}{(\ )} \qquad (2)\ \frac{200}{12}\frac{\%}{} \qquad (3)\ \frac{(\ )}{12}\frac{.06}{}$$

PRINCIPLES. (1) Given the factors to find the product. (2) Given the product and one factor to find the other factor. (3) Same principle as (2).

Give much practice in these three problems. Give many off-hand exercises to class. Teach pupils to look for *relations*. Here is a good place to develop the reason and judgment.

Now let percentage rest for a short time and take up

DENOMINATE NUMBERS.—

DEVELOP. Long measure.—Do much measuring. Judge of distances.

MAKE table of square measure. Make table cubic measure. *Use blocks* for cubic measure.

BOARD FOOT—Get a board foot. Compute much here. *All sizes* of timbers.

AVORDUPOIS WEIGHT.—Use scales. Judge of weight of objects.

LIQUID MEASURE. Use actual measure.

DRY MEASURE. Use actual measure.

TIME TABLE—STANDARD TIME. Have a map.

SURVEYOR'S TABLE—Use measures to develop. Troy weight. Apothecaries' weight and liquid measure.

METRIC SYSTEM.—Develop tables. Use metre, gram, and litre to do it. Money, coin, specie, currency, paper money. Reduction ascending and descending—concrete and abstract numbers, simple and compound numbers.

INTEREST.—Teach one method, the six per cent. Interest for 2 mo. =.01 of the prin. Int. for 6 days=.001 of the prin. Require pupils to give the proof of this. Give much drill to secure accuracy and speed.

The legal rate for Michigan is 5%, but 6 or 7% may be collected by contract.

Pupils write a promissory note—Interest, amount, good form of work.

ANNUAL INTEREST.—Look up special law of Michigan. *Write notes.* Compute. *Steps in work.* (1) Int. on prin. for time note runs. (2) Int. on each years' interest from time due to maturity of note. (3) Total interest. (4) Amount.

PARTIAL PAYMENTS.—Pupils write notes. Make endorsements. Compute interest. New principal. Give much practice. Give it an air of business.

BANK DISCOUNT.—Write bank note, bank discount, proceeds, holder, drawer, payee, indorser, face of note, maturity. Illustrate clearly here.

DISCOUNTING NOTES.—Bankers' method. (1) Notes with interest. (2) Notes without interest. (3) Discounting same day note is given, with interest.

EXACT INTEREST—Compute by 6% method. Subtract $\frac{1}{73}$ of it to get exact interest. Why? Used by whom?

COMMISSION.—Certain per cent. of money invested. One cent per bushel. Retain commission. Paying by check. Ascertain how business is done.

DEFINITIONS.—Profit, loss, net, commission, agent, consignment, consignee, consignor.

COMMERCIAL DISCOUNT.—List price. Several discounts. Net price. *Practice.*

TRUE DIRCOUNT —Present wotrh. True discount—*When used in business?*

TAXES—TOWNSHIP. Real estate, personal property, assessor; assessment; board of review; amount to be raised; how determined; by whom determined; rate of taxation; extending roll.

COUNTY—Board of Supervisors; county tax; how determined; by whom determined; apportionment to township.

STATE—Board of Equalization; amount of tax, how determined; by whom; apportionment to counties.

Make out an assessment roll for your district. Extend the roll as *Supervisors do.*

PARTNERSHIP.—(1) Partners. (2) Capital stock. (3) Shares. (4) Gross gains or loss. (5) Expenses. (6) Net gain. (7) Dividend or assessment. *Make* up an example to illustrate this. Companies. *Incorporated.* How done. *Purpose.* Unincorporated. Limited. Liabilities. Resources. Deficit. *Charter.*

BONDS—(1) District. (2) Township. (3) County. (4) State. (5) U. S. (6) Corporation. (7) Purpose in bonding. *Illustrate* in school district. (8) Registered. (9) Coupon.

STOCKS.—Share, certificate, par value, market value, broker, brokerage, quotations.

INSURANCE.—Property, life, policy, *mutual,* old line, *endowment,* assessment.

EXCHANGE.—Postoffice order, registered letter, express, express money order, telegraph, *draft,* check. Write a draft for $100. Write a check. Difference. *Clearing house. Bills of credit.*

DUTIES AND CUSTOMS.—Purposes, by whom paid, where paid, free list, advalorum duty, specific.

INTERNAL REVENUE.—Spirits, tobacco, fermented liquors· oleomargarine, etc.

RATIO.—Dividend, divisor, or antecedent, consequent, quotient, sign, dividend and divisor like numbers. *Principle* same as of fractions.

PROPORTION—Equality of ratios, as,

$\frac{8}{2}=4$; $\frac{16}{4}=4$; $\frac{8}{2}=\frac{16}{4}$ or $8\div 2=16\div 4$.

Solving for missing term—

$\frac{8}{2}=\frac{16}{()}$. $8\times2=16$; $2\times2=4$ missing term.

$\frac{3}{4}=\frac{()}{10}$. $4\times2\frac{1}{2}=10$; $3\times2\frac{1}{2}=7\frac{1}{2}$ missing term.

Method (2). $\frac{3}{4}=\frac{x}{10}$. $4x=30$.

$x=7\frac{1}{2}$.

Use both methods.

Stating Problems—

4 articles cost 20 cents

2 " " 10 cents. Ratio of articles $=\frac{4}{2}=2$.

Ratio of cost of articles $=\frac{20}{10}=2$; Ratio of articles = Ratio of cost of article.

Give many simple problems involving this principle.

Inverse Proportion—

8 men do a piece of work in 24 days;

4 " " same " " " " 48 "

Ratio of men $=\frac{8}{4}=2$. Ratio of days $=\frac{24}{48}=\frac{1}{2}$

Hence, $2=\frac{2}{1}$, the inverse of $\frac{1}{2}$.

This kind of proportion is much used in *Physics*—light, heat, sound.

Speer method of using ratio—

8 articles cost 20 cents, 16 articles cost 40 cents, 5 articles cost 15 cents, 7 articles cost $\frac{7}{5}$ of 15 = 21c. $\frac{2}{3}$ of an article costs 12 cents. $\frac{1}{2}$ of same article costs $\frac{3}{4}$ of 12 cents = 9 cents.

Definitions.—Extremes, means, signs, inverse, direct, *compound*, etc.

Involution.—Power, root, exponent, square, cube, perfect power.

Evolution.—Square root, cube root, pointing off. *Why?* Operation, reasons, trial divisor, complete divisor.

Complete Divisor.—Value of square root and cube root.

Progression.—Arithmetical and geometrical. First term, com. diff.; last term, sums; first term, com. ratio; last term, sums. This is better omitted until the pupil has had algebra.

MENSURATION.

LINES—Straight, curved, horizontal, perpendicular, parallel.

ANGLES—Straight, right, acute, obtuse,

Develop $a^2+b^2=h^2$. 

AREA—We mean the number of square units in a given surface. The units used are the square inch, square foot, square yard, square rod, square mile. One order of development: (1) Squares. (2) Isosceles Right Triangle. (3) Rectangle. (4) Scalene Right Triangle. (5) Parallelogram. (6) Scalene Triangle. (7) Rhombus. (8) Isosceles Triangle. (9) Equilateral Triangle. (10) Trapezoid. (11) Polygon Regular. (12) Polygon Irregular. (13) Circle.

Draw figures. Cut out figures. Prove equality of triangles. Divide into squares. Make this subject plain. Do not teach it by rule. Remember the multiplier is always abstract. 10 sq. inches $\times 2=20$ sq. inches. How many squares in one row? How many rows?—*Say it right.*

In connection with these areas, teach carpeting, plastering, papering, painting, flooring. *Problem.* Make all these computations for your school room.

VOLUME.

Volume: We mean the number of cubic units in a given space. Develop in following order: (1) Right Rectangular Parallelopiped. (2) Cube. (3) Right Triangular Prism. (4) Any Right Prism. (5) Right Triangular Pyramid. (6) Any right Pyramid. (7) Cylinder. (8) Cone. (9) Sphere. (10) Frustum of a cone.

Have these solids made of tin. Do not attempt to teach it without tins. Use blocks.

Compute the lateral areas of these solids.

VOLUMES OF BINS.—Let pupils solve many practical examples Be sure to bring out the relations between certain solids.

PHYSIOLOGY.

ANATOMY is derived from two Greek words meaning, the science of dissection.

Human Anatomy is the science which treats of the structure, form, and location of the various parts of the body.

Histology is microscopic anatomy.

Physiology is the science which treats of functions.

Function is the work of an organ.

Organ is a part of the body that has a special function.

Hygiene is the science of health.

Health is the natural condition of the organs of the body.

Disease is the unnatural condition of the organs of the body.

Organic bodies are those that contain organs; as animals and plants.

Inorganic bodies, those that do not contain organs, as minerals.

BONES.

SKELETON—Made of bones which form the frame work of the body.

COMPOSITION—(1) animal matter; (2) mineral matter.

The proportion of the animal matter to the mineral matter varies with age. In childhood the bones contain more animal matter, and thus are more elastic; while in an adult they contain more mineral matter and are brittle and easily broken. The animal matter can be removed by burning, and the mineral matter by soaking in dilute muriatic acid.

USES.—(1) The frame work of the body. (2) To protect delecate organs. (3) To act as levers for the production of motion. (4) Surfaces for the attachment of muscles.

PERIOSTEUM.—A fibrous, vascular membrane covering the bones.

ENDOSTEUM.—A vascular membrane surrounding the medullary canal, which nourishes the inside of the bone.

The effects of alcohol and tobacco on the bones.

CLASSIFICATION OF BONES—

HEAD (28).—(1) Cranium (8 bones), frontal, occipital, 2 parietal, 2 temporal, sphenoid, ethmoid.

(2) Face (14 bones).

2 superior maxillary, 2 molar, 2 nasal, 2 lachrymal, 2 palate, 2 turbinated, inferior maxillary, vomer.

EAR (6 bones). Hammer, anvil, stirrup.

TRUNK (54 bones).

1—Spinal column (24 bones.) 7 cervical, 12 dorsal, 5 lumbar and 2 sacral.

RIBS.—24 bones.

14 true ribs, 6 false ribs, 4 floating ribs.

Sternum.

Hyoid bone.

Two innominate bones.

UPPER LIMBS. 64 bones.

Upper arm.—2 scapula, 2 clavicle, 2 humerus.

Forearm.—2 ulna, 2 radius

Hand.—16 carpel, 10 medacarpal, 28 phlanges.

LOWER LIMBS. 60 bones.

Leg.—Femuer 2, patilla 2, tibia 2, fibula 2.

Foot.—14 tarsal, 10 metatarsal, 28 phlanges.

MUSCLES.

USES.—To produce the various movements of the body. To give form and symmetry to the body.

CLASSES.—Voluntary muscles because their movements are generally under the control of the will, as the biceps.

Involuntary muscles perform their functions independently of the will.

Mixed muscles because they are partly voluntary and partly involuntary.

STRUCTURE.—

Voluntary muscles are made of striated fibres surrounded by membrane called the sarcolemma. These fibres form bundles, and bundles form muscles.

Involuntary muscles are made of fibres that are spindle shape and unstriated as the muscles of the walls of the stomach.

NUMBER.—There are over four hundred arranged in pairs.

TENDONS.—Are white fibrous tissue connecting muscles to bones. They are most numerous around the larger joints. The largest tendon in the body is the tendon of Achilles connecting the muscles on the back of the leg with the heel.

LEVERS.—First class—Fulcrum, between the weight and power.

Second class—Weight between the fulcrum and power.

Third class—Power between the weight and fulcrum

EXERCISE.—(1) The importance of exercise; (2) when to exercise; (3) how to exercise; (4) what is normal exercise and its effect? (5) what is abnormal exercise and its effect?

SKIN AND BATHING.

SKIN—The skin is the external covering of the body composed of two layers: the cutis, or true skin, and the cuticle, or false skin.

Use of dermis. Use of epidermis.

FUNCTIONS OF THE SKIN—An organ of protection, sensation, absorption, excretion, respiration and a regulator of temperature.

APPENDAGES OF THE SKIN—Hair, nails, sweat glands, and sebaceous glands.

HAIR—Structure; cause of color; uses of the hair on different parts of the body.

NAILS—Structure, function.

BATHING—Importance; value of bathing; time for bathing; reaction and its value; kinds of baths: Russian, Turkish, mud, sun, and mineral baths.

Why should good soap be used?

KIDNEYS.

Location, size, structure, and function.
Effects of alcohol on the skin and kidneys.

DIGESTION.

Digestion is the process of converting food into blood.

Assimilation is the process of converting blood into tissue.

ORGANS.—Mouth with its appendages form the first division of the alimentary canal. The teeth are organs of mastication; thirty-two in number. Tongue assists in mastication

Salivary glands secrete a alkaline juice called the saliva. Parotid 2, submaxillary 2, sublingual 2.

The pharynx is a funnel shaped tube about four and a half inches long in the back part of the throat into which the esophagus and the trachea open. There are two openings from the pharynx leading to the nose called the posterior nares, and two leading to the ear, called the Eustachian tubes.

Esophagus or gullet is a membranus tube about nine inches long connecting the pharynx with the stomach.

The Stomach—A pear shaped organ located beneath the ribs, composed of three coats and has two openings—the cardiac from the esophagus, and the pyemus to the intestines Next, in the walls of the stomach are gastric glands that secrete a acid fluid called the gastric juice

Small Intestine—A tube beginning at the lower end of the stomach. It is about twenty feet long and divided into three parts. The first one is called the duodenum. It is about twelve inches long and into this tube the bile and pancreatic ducts empty. The second division is the jejumun, and the last one is the ileum.

The Ileocoecal valve is located between the first division of large intestines and the ileum. Attached to the co-æcum is a small tube called the vermiform appendix. Its use is not understood. The second division of the large intestines is divided into three parts: ascending, transverse, descending colon. The last division of the large intestine is the rectum.

Pancreas—A gland located behind the stomach that secretes an alkaline juice which flows into the duodenum.

The Liver—The largest gland in the body, secretes an alkaline juice called the bile.

The Gall-bladder—A small sack fastened to the under side of the liver and is used to hold bile for future use.

Thoracic Duct is a tube about sixteen inches long which conveys chyle and lymph to the left side of the neck.

The steps by which food is converted into tissue are as follows: Mastication, insalivation, deglutition, stomach and intestinal digestion, absorption, circulation, assimilation.

CIRCULATION.

Circulation is the continuous movement of the blood from the heart to repair the system, and its return to the lungs to be purified.

Organs of—

Heart is a hollow, cone shaped muscular organ with two auricles and two ventricles located between the lungs a little to the left of the body. The right auricle receives impure blood and the left ventricle forces pure blood all over the body.

Pericaridum is a serous membrane that surrounds the heart.

Endocardium—Is a serous membrane that lines the inside of the heart.

Arteries.—Tube like canals with the three elastic coats which convey the blood from the heart to the capillaries.

Veins—Are the vessels that convey the blood from the capillaries to the lungs. They also have three coats, but are inelastic.

Capillaries—Are the small vessels that connect the arteries with the veins.

Blood.—Arterial blood is a bright, pure red liquid used to nourish the different tissues.

Venous blood is a dark blue, impure liquid charged with impurities.

Composition. Plasma, a colorless fluid richly charged with material derived from the food.

Corpusles:—Are of two kinds—red and white. The red ones carry oxygen to the tissues and carbonic acid from the tissues. The white ones are larger than the red ones and are used as scavengers.

Coagulation of Blood—

Blood { Plasma { Serum.....Serum. / Fibrin.....Clot. ; Corpuscles { Red / White }

RESPIRATION.

Organs of Respiration—

Nose, is used to warm, filter and moisten the inspired air.

Pharynx—a passage for air between the nose and larynx.

Larynx, is a cartilaginous box at the top of trachea across which are stretched the vocal chords. The opening into the larynx is the glottis, and the covering of the glottis, is the epiglottis.

Trachea, or, wind-pipe, is an elastic tube about four and one-half inches in length which connects the larynx with the bronchial tubes. These bronchial tubes divides and sub-divide until they finally end into lobules. The trachea is held open by means of rings of cartilage.

Lungs—Two in number and are the principal organs of respiration. It is here where the venous blood is changed to arterial.

Pleura—A serous membrane covering the lungs and inside of the thoracic cavity.

Inspiration—The process of breathing air into the lungs, and thus giving oxygen to the blood.

Expiration—Breathing out the impurities.

Diaphragm—A muscular membrane separating the thoracic from the abdominal cavity.

Impurities in the air and how disease germs are produced from them.

Impurities in the school room, and how they are removed by ventilation.

Deodorizer—Something that will cover up an odor, as burnt coffee.

Disinfectant—Anything that will destroy germs, as sulphur.

Antiseptic—Anything that has the power of destroying the disease germ, as zinc sulphate.

Absorbent—Anything that will absorb odors, as lime and charcoal.

NERVOUS SYSTEM.

Object.—To regulate the movements of the body.

The nervous system is divided into two divisions: 1. Cerebro spinal nervous system, and (2) the sympathetic.

The Cerebro spinal system is composed of the brain, spinal cord, and the nerves that branch from them.

The sympathetic system is composed of most of the nerves in thoracic, abdominal and pelvic cavities.

Brain.—The organ of the mind.

The brain is composed of gray matter on the outside which originates nervous force, and white on the inside which conveys it.

Divisions.—Cerebrum—The largest and most important part of the brain. The seat of intelligence is located here. It is composed of a mass of white fibres covered with gray cells. The surface of the cerebrum is deeply convoluted.

Cerebellum—(Lesser brain) It is about one-eighth as large as the cerebrum and controls voluntary motion.

The surface of the cerebellum is covered with parallel ridges.

Medulla oblongata, or spinal bulb is the enlarged portion of the spinal cord. It is located within the skull.

The Spinal Cord is a cylindrical mass of nervous tissue about eighteen inches long located in the spinal canal.

The brain and spinal cord are protected by three coverings: first, the outer one is called the Dura-mater. A dense firm membrane used for protection. Second, the Arachnoid is a serous membrane located beneath the Dura mater and secretes a lubricating fluid. Third, Pia mater, a delicate vascular membrane used to supply the brain with blood.

NERVES.—Silvery thread surrounded by the perineurium composed principally of white matter. They connect all the organs with the brain and spinal cord. Each nerve has two sets of fibres. The sensory, to carry sensations, and the motor, to carry motor impulses.

CRANIAL NERVES.—There are twelve pairs originating from the base of the skull. 1. Olfactory; 2. Optic; 3. Motores oculi; 4. Pathetici; 5. Trigeminals: 6. Abducentes; 7. Facial; 8. Auditory; 9. Glossopharyngials; 10. Spinal accessory; 11. Pneumogastric; 12. Hypoglossals.

SPINAL NERVES.—There are thirty-one pairs of spinal nerves that issue from the spinal cord.

Divisions of the spinal nerves:—Eight cervical, twelve dorsal, five lumbar, six sacral.

SYMPATHETIC NERVES.—Extend from a double chain of ganglia on either side of the spinal column to the heart, lungs, stomach, etc.

REFLEX ACTION.—Any nerve force transmitted to a nerve center by a sensory nerve and then reflected to a motor nerve so as to produce secretion or musular movement, is called reflex action.

Use of reflex action—artificial reflex action.

SPECIAL SENSES.

SIGHT.—Organ of sight is the eye. Location—

The organ of vision is composed of three coats. 1. Sclerotic—a hard, firm coat used to protect the eye ball. 2. Choroid—a vascular coat containing pigment cells. This coat is used to absorb superfluous light. 3. Retina—an expansion of the optic nerve. It is used to receive the rays of light which come from the objects.

Eye-lids—Two movable curtains which cover the front part of the orbit.

Eye-lashes—Are the hairs on the lid used as a screen.

Lachrymal glands secrete the tears which keep the surface clear and transparent.

Cornea—The thin transparent part of the sclerotic coat.

Iris—The colored curtain which lies back of the cornea.

Pupil—The opening into the Iris.

Crystalline lens—Located back of the pupil, and is used to focus rays of light on the retina.

Aqueous Humor—A water like liquid lying between the lens and the cornea.

Vitreous Humor—A jelly like mass behind the lens.

Optic Nerve—The connecting link between the eye and brain.

Conjunctiva—The inner lining of the lid and the covering of the front part of the eye-ball.

Tarsal Cartilages—Between the lid and conjunctiva.

Meibomian Glands—Between cartillages and conjunctiva secrete oil.

Blind Spot—Where the optic nerve enters the eye. It is insensible to light.

Yellow Spot—Directly back of the pupil. It is the most sensitive part of the retina.

Emmetropic—Is a perfect eye.

Myopia—Or short-sight. Remedy, concave lens.

Hypermetropia—Long sight, Remedy, convex lens.

Presbyopia—Old sight. Remedy, convex lens.

Astigmatism—The inability to focus perpendicular lines.

Care of the eyes.

HEARING.

Ear—Is the organ of hearing. It consists of three parts. First—External ear—is composed of the auricle for catching sound, and the auditory canal, a tube about an inch and a quarter long, closed at the inner end by the tympanum.

Second—Middle ear. It is separated from the external ear by the tympanic membrane. This division of the ear contains three small bones—hammer, anvil, and stirrup.

Eustachian tube used to admit air from the pharynx to the middle ear.

Third—Inner ear, is composed of the labyrinth and a part of the auditory nerve.

Vestibule—central portion of the labyrinth.

Cochlea—Is a tube in the upper portion of the labyrinth.

Semicircular Canals—Canals in the lower portion of the labyrinth.

SMELL.

The sense by which we appreciate odors.

Location—This sense is located in the mucous membrane which lines the nose.

Uses—(1) To aid in selection of food and drink. (2) To warn us of impure air.

Olfactory Nerves—The first pair of cranial nerves are special nerves of smell.

Nasal Passages—Two high narrow canals extending from the nostrils to the top of pharyrx. The inner walls of each passage is straight while the outer is made uneven by three small turbinated bones. The septum separates the nasal passages. Cultivation of this sense.

TASTE.

The sense by which we appreciate flavors.

Location—It is located in the mucous membrane of the tongue, of the soft palate, and also in the back part of the throat.

Papillae—Kinds, use.

Nerves of Taste—There is no distinct nerve of taste. Two-thirds of the tongue is supplied by the lingual branch of the trigeminals and one-third by the lingual branch of the glosso-pharyngeal nerves.

USES—(1) To aid in selection of food. (2) Excites the flow of saliva.

TOUCH.

The sense by which we appreciate the form of objects and also temperature.

LOCATION—In all parts of the body, especially at the tip of the tongue and ends of fingers.

USES—To aid the other senses.

MUSCULAR SENSE—That which enables us to estimate the weight of bodies.

SENSE OF TEMPERATURE—The sense of heat and cold.

WHAT PRODUCES PAIN?

ALCOHOL.

DEFINITIONS—

Alcohol—The active and intoxicating principle of all fermented liquors.

Stimulant—An agent that produces an increase of vital activity in the body.

Narcotic—An agent that produces sleep, stupor, paralysis, and often death.

ORIGIN OF—

Fermentation—The change which takes place in the elements of an organic substance under the influence of a decomposing agent called a ferment.

Distillation—The separation of fluids that boil at different temperature by evaporating one and again condensing it.

SOURCE OF—

Sugar and starch, or any substance containing saccharine matter.

PROPERTIES OF—

A colorless fluid of an agreeable odor and strong, pungent taste. Its chemical proprieties are carbon, hydrogen and oxygen; in commercial or ethylic alcohol, there are two parts carbon, six hydrogen and one oxygen. It has a great affinity for water, absorbing it from the atmosphere. It

is very inflammable, burning with a pale bluish flame without smoke. It is a powerful solvent, and employed in medicine in the preparation of tinctures and in the arts to dissolve resins, gums, oils, etc. It boils at 173° F. and no degree of cold ever yet obtained has effected its congelation. Its antiseptic properties prevent chemical change in organic substances.

EFFECTS OF—

On Nervous System—Alcohol mainly selects the cerebro-spinal nervous system for its great center of action; the nerves of motion are especially effected. The cerebrum and cerebellum become hardened by its use and the cerebral arteries in a state of fatty degeneration.

On Digestion—The chemical action of alcohol is to prevent change in organic substances, which is the work of digestion from first to last. It is indigestible, and is taken up by the absorbents and carried into the blood. Its circulation through the lungs gives one who drinks it the "whiskey breath."

On the Stomach—It becomes congested and greatly wrinkled, as if a powerful astringent had been taken; the mucous membrane becomes white, and thickened; or softened and covered with a muco-purulent secretion.

On the Blood—It becomes fluid and venous by the separation of the plasma, increases in carbon and hydrogen, contains less oxygen and but little fibrin, which accounts for its non-coagulating property.

On the Mind—The general effects are confusion of thought, loss of memory, various mental affections varying with individual character, less power of self control and loss of moral power.

On the Muscular System—The influence of alcohol is to lessen the amount of carbonic acid exhaled from the lungs, and to diminish muscular force in the same ratio.

On the Special Senses—It produces hallucination of *sight* by seeing things double or a variety of objects, indicating that it especially affects that portion of the brain that gives rise to the *optic nerve*. *Taste* and *smell* are impaired by its influence upon mucous membrane.

On the Brain—It hardens and impairs its delicate texture, blunts the finer sensibilities, and man loses the power of self-control, self-respect, descending step by step in intellectual and moral power.

On the Heart and Liver—The superior affinity for oxygen, which alcohol possesses, prevents the proper elimination of effete matter, thus producing fatty degeneration of these organs:

Transmitted Effects—The diseased condition of the system, induced by the stimulating and narcotic effects of alcoholic drinks, must reproduce in the child the characteristic tendencies of the parent.

On the Temperature of the Body—"For a few minutes after alcohol is administered, to the amount of a gill of wine or brandy, the temperature rises slightly, after which it falls several degrees below the standard of health, and remains so for hours."
—W. B. CARPENTER.

"It is doubtful if another single agent can be named, which, introduced into the system from without, has been the occasion of a greater amount of disease, mental decay and premature death."
—J. C. HUTCHINSON, M. D.